DOCUMENT RESUME

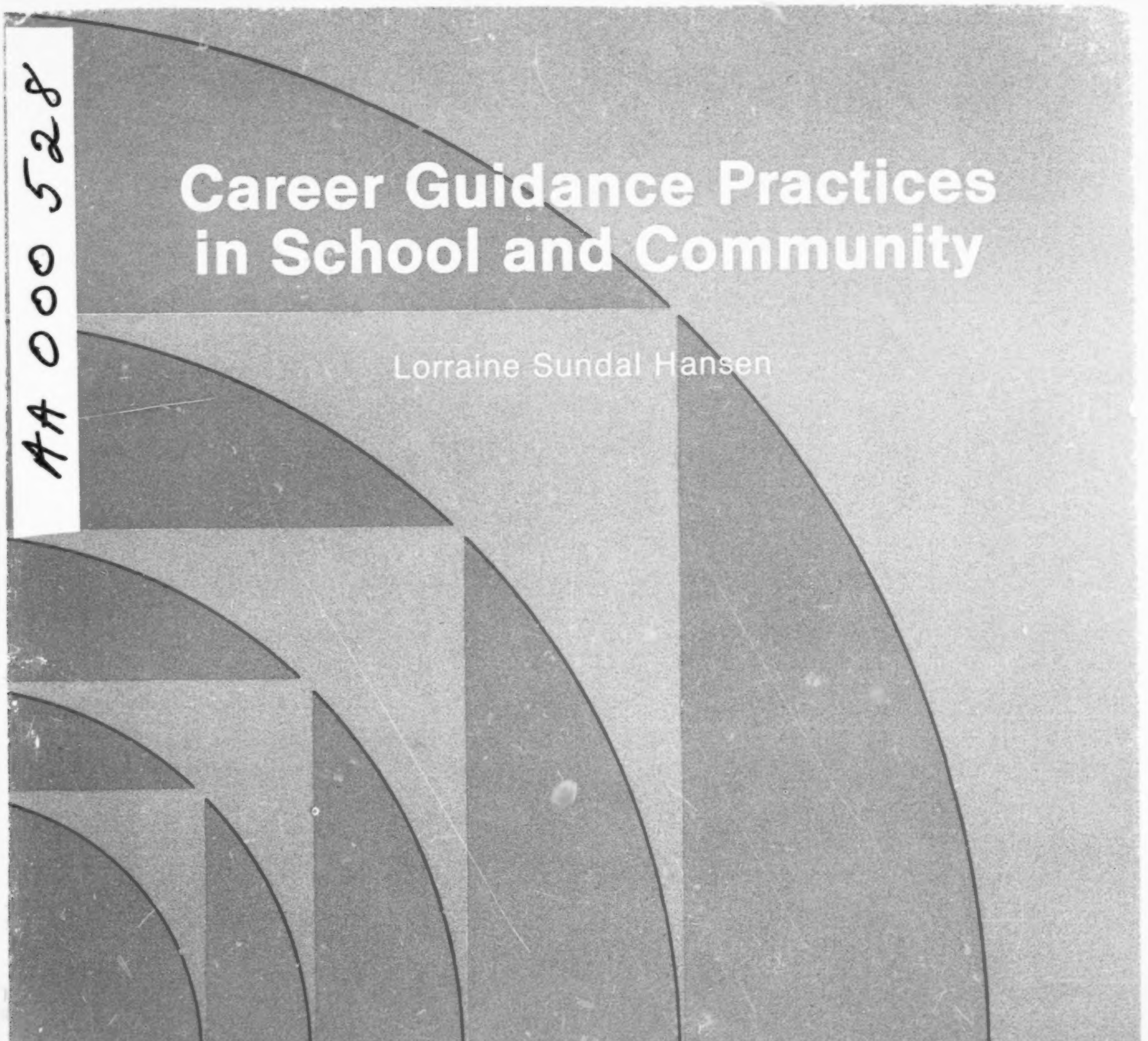
ED 037 595 AA 000 528

AUTHOR	Hansen, Lorraine Sundal; And Others
TITLE	Career Guidance Practices in School and Community.
INSTITUTION	ERIC Clearinghouse on Counseling and Personnel Services, Ann Arbor, Mich.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C. Bureau of Research.
BUREAU NO	BR-6-2487
PUB DATE	70
CONTRACT	OEC-3-6-002487-1579-(010)
NOTE	200p.
AVAILABLE FROM	National Vocational Guidance Association Publication Sales, 1607 New Hampshire Avenue, N.W., Washington, D.C. 20009 ($3.95 per Copy)
EDRS PRICE	EDRS Price MF-$1.00 HC-$10.10
DESCRIPTORS	*Career Planning, Computer Oriented Programs, *Guidance Programs, Information Systems, Occupational Choice, *Occupational Guidance, Program Development, *Research Reviews (Publications), *Vocational Development, Vocational Education

ABSTRACT

This monograph is designed to determine what is being done in the nation's schools in the area of career guidance. From a survey of state departments of education, professional journals, research reports, colleges and universities, conference reports, vocational guidance specialists, and individual school systems; an attempt has been made to select proven programs and techniques related to the school curriculum. The monograph is organized into six chapters. Chapter One summarizes principles and trends of career development. Chapter Two describes current practices and programs. Chapter Three presents school community projects. Chapter Four discusses computer oriented systems. Chapter Five concerns guidance and vocational education and examples of programs. Chapter Six presents issues and challenges for the future. Included are chapter summaries, supplementary references and a subject index. (Author/CJ)

AA 000 528



Career Guidance Practices in School and Community

Lorraine Sundal Hansen

ED 037 595

CAREER GUIDANCE PRACTICES IN SCHOOL AND COMMUNITY

Career Guidance Practices
in
School and Community

by

Lorraine Sundal Hansen

Henry Borow
W. Wesley Tennyson
Consultants

The work presented herein was performed pursuant to a contract from the
UNITED STATES OFFICE OF EDUCATION
Department of Health, Education and Welfare
Under the direction of
ERIC COUNSELING AND PERSONNEL SERVICES CENTER
Garry Walz, Director
University of Michigan, Ann Arbor

Published by
NATIONAL VOCATIONAL GUIDANCE ASSOCIATION
A Division of American Personnel and Guidance Association
1607 New Hampshire Ave., N.W. Washington, D. C. 20009

1970

National Vocational Guidance Association
A Division of American Personnel and Guidance Association
1607 New Hampshire Avenue, N.W., Washington, D. C. 20009
Library of Congress Catalog Card Number: 70-121226
Printed in the United States of America

"Man will become the best that he can be
When you and I find ways to set him free."

Source Unknown

PREFACE

What is career guidance? What are the programs and procedures which counselors and others in schools, business and industry use in order to further career development? How do school and community programs relate to each other for maximum coverage and effectiveness? How do the new media fit in, and how does their use affect the use of traditional media?

The ERIC data base at the University of Michigan, under its Director, Professor Garry Walz, was a logical repository for information bearing on these questions. He therefore asked Dr. Lorraine Hansen to search the field, organize the material, and to write it up in book form to make it accessible to working counselors, counselor educators, teachers, administrators, and others interested in fostering the career development of youth. Professors Henry Borow and Wesley Tennyson of the University of Minnesota (both former NVGA presidents) agreed to serve as consultants. A great many people throughout the whole United States cooperated in sending requested materials to Dr. Hansen, thus making possible more complete description and more thorough discussion of programs and of underlying principles: their very number makes naming them here impossible. G. Dean Miller has facilitated publication by serving as managing editor, for NVGA's Publication Committee, for this project.

The National Vocational Guidance Association takes great pleasure in opening the new decade, its seventh, with the sponsorship of this important publication. Neither the assembling nor the disseminating of information is a simple task. When the practices are to be analyzed and thoughtfully discussed the task is more difficult still. NVGA is glad to cooperate with Michigan's ERIC, with Dr. Walz, and with Dr. Hansen in completing this task.

Donald E. Super
President, NVGA

FOREWORD

It is a major objective of the ERIC Counseling and Personnel Services Information Center to assist counselors to acquire and utilize relevant informational resources for the improvement of both counselors and guidance programs. This objective has lead us to identify areas where counselors believe there is a pressing need for new information, and then seek to develop appropriate resources.

The area of *career planning* has long had a high priority in both counselor preparation programs and guidance program operation. Recent writings by both guidance practitioners and others interested in school improvement have stressed the importance of a viable program of career planning in *each* school if all students are to receive an education relevant to their needs and interests. A major difficulty, however, in *implementing* a career planning program (as opposed to stressing the need for such a program) has been a relative paucity of evaluated resources which could be used by counselors, teachers, and others interested in developing operational programs.

To consider means for responding to this need I consulted with Dr. Henry Borow and Dr. W. Wesley Tennyson of the University of Minnesota. Through several meetings and extended discussions we arrived at the decision to develop a monograph on career planning which would bring together the most current thinking *about* and practices *in* career planning. The aim was to develop a practitioner-oriented resource which could be used by counselors and other educators to design career planning programs and which would illustrate the wide range of materials and procedures available for use in such programs.

Happily, Dr. Lorraine Hansen at the University of Minnesota agreed to undertake the authorship of the monograph. This delighted us all because she brought to the task both a deep theoretical understanding of vocational development and extensive experience in counseling with students and developing programs in the area of career planning.

In many ways the approach used in the development of this monograph represents a model which will serve CAPS well in future activities. The major ingredients in that model were: (1) consultation with acknowledged conceptual leaders in a high interest area (in this case, Drs. Borow and Tennyson) relative to the development of a publication; (2) contracting with an individual to undertake the writing-editing responsibility (Dr. Hansen);

(3) using the resources of the ERIC/CAPS Center to identify and retrieve relevant informational resources; and (4) dissemination of the publication through an existing professional network (NVGA). It is an approach we will want to use again.

As a pioneer effort, there were many problems to be overcome. Neither deadlines nor goals were as easy to meet as it seemed they might be. Two outcomes, however, have made the experience a rewarding one. First, is the *monograph.* In our judgment it is unique in the career planning area and will prove to be a functional resource for those involved in vocational guidance, especially counselors. Second, the process of developing the monograph was both challenging and satisfying. We were most fortunate in our choice of collaborators, for they enriched our lives personally and professionally.

In any undertaking such as this monograph, acknowledgement of the special contributions of some people is due. Clearly, Lorraine (Sunny) Hansen made the monograph possible by her editing and writing skill and her personal commitment to see the task through. Likewise, it is unlikely that the monograph would ever have materialized in its present form if it had not been for the initial enthusiasm, continuing support, and assistance of Henry Borow. We owe a debt of gratitude to him for the culmination of the monograph. At critical moments in the writing of the monograph we were fortunate to have available the sage consultation of Wesley Tennyson who was most helpful with his succinct responses and suggestions.

In our ERIC/CAPS Center Mrs. Juliet Miller and Mrs. Nancy Sloan were responsible for a yeoman's job of editing and proofing, and overall assistance in moving the monograph forward. The final product clearly carries their imprint.

Our great appreciation is also due to the many counselors, state departments of education, researchers, and all who willingly shared with us their programs and procedures. Their materials were of inestimable value in developing a resource which, hopefully, has both theoretical soundness and practical utility.

To all who may read and use this monograph, I sincerely hope that they will see it as a beginning rather than an end, and share with us ways and means that we may better serve the needs and interests of counselors, and the vocational guidance needs of youth.

Garry R. Walz
Director, ERIC Counseling and
Personnel Services
Information Center
December, 1969

U.S. DEPARTMENT OF HEALTH, EDUCATION
& WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

CONTENTS

INTRODUCTION 1

Chapter I

PRINCIPLES, TRENDS, AND CONCEPTS OF CAREER DEVELOPMENT 3
- Definitions 4
- Career 4
- Decision-Making Process 5
- Career Guidance Curriculum 6
- Career Development Principles 7
- Societal Trends and Influences 8
- Pertinent Theory and Research 9
- Conferences 14
- Implications for Practitioners 19
- Summary 20

Chapter II

PRACTICES AND PROGRAMS IN THE SCHOOLS 22
- PROGRAMS OF DEVELOPMENTAL OR SEQUENTIAL CHARACTER 23
- The Developmental Career Guidance Project — Detroit 23
- The Occupations Curriculum — Cleveland 27
- Career Guidance Program — University High School, Minneapolis 28
- Developmental Career Information Program — Olson Junior High School, Minneapolis 31
- Occupational Information Materials Project — Atlanta, Georgia 31
- Project BEACON — Rochester, New York 34
- Career Development Program — Chicago 35
- SAVIS — The Self-Administering Vocational Information System — Appalachia Educational Laboratory 36
- Suggested Models for Junior High School Exploratory Programs — West Georgia College Conference 38

Developmental Vocational Guidance — Oklahoma State Department of Education 39
Experimental Career Development Project — Abington, Pennsylvania 39
A Vertically Integrated Occupational Curriculum for Schools in Michigan 39
Guidance Program Planning Project — Colorado 40
Group Guidance Activities, K-12 — Roslyn Public Schools 40

PROGRAMS WITHIN COURSES 40
High School 40
Elementary School 51
Special Projects 54
Summary 56

Chapter III

COORDINATING SCHOOL-COMMUNITY RESOURCES 57

PROGRAMS FOR STUDENTS 57
Career Conferences 57
Career Weeks, Days, and Clubs 62
Industrial Visits and Tours 63
Cooperative Work Programs 68

SPECIAL PROJECTS AND MATERIALS 70
Diversified School-Community Programs 70
Student Materials Furnished by Industry 72
Teaching Aids 74
Essay Contests 75
Inter-Agency Cooperation 75

PROGRAMS FOR TEACHERS AND COUNSELORS 76
Counseling Employment-Bound Students — Oakland Guidance Project 76
North Carolina Workshop in "Career Planning and Development" 78
Summer Career Guidance Workshop — San Diego 79
Workshop on Employment Problems of Negro High School Graduates — Case Western Reserve University 79
The Quad City Industrial Orientation Program for Counselors — Iowa 80
Career Guidance In-Service Education — Los Angeles, California 80
Arizona In-Service Projects 81

Preparing Counselors for Developing a Maximum Range of Vocational Maneuverability in Students — South Bend, Indiana 81
General Electric Summer Guidance Fellowship Programs 82
Goodyear Tire and Rubber Company Project 82
Firestone Tire and Rubber Company Project 82
Distributive Education Pilot Training Project in Career Development — University of Minnesota 82
Counseling for Industrial, Trade, and Technical Occupations — Dunwoody Institute, Minneapolis 83
Summary 83

Chapter IV

CAREER GUIDANCE UTILIZING ADVANCED MEDIA AND TECHNOLOGY 84
Types of Information Systems 85

MULTIMEDIA TECHNIQUES 87
VIEW and the Regional Career Information Center — San Diego 87
Communication in Guidance Project — University of Pittsburgh 88
Audio Tape Messages 89
A Model of Effective Problem Solving Applied to Educational-Vocational Planning 89
That's My Business — Atlanta, Georgia 89
Edu-Cast — Detroit 90
SEARCH — Boston 90
Guidance Associates Films and Filmstrips 91
Demonstration Occupational Information Dissemination Unit . . 92
ECS Computerized Scholarship-Search Service — Princeton, New Jersey 92
Chronicle College Viewdeck 93
College Occupational Exploration Kit — OccuSpan 93
Admissions Search Kit 93
Life Career Game 94
Vocational Simulation Kits 97

COMPUTER-ASSISTED GUIDANCE 98
Educational and Career Exploration System (ECES) 98
A Harvard-NEEDS-Newton Information System for Vocational Decisions (ISVD) 100

Project PLAN (A Program for Learning in Accordance with Needs) 102
System of Interactive Guidance and Information (SIGI) 104
University of Oregon GUIDPAK System 105
Rochester Automated Developmental Counseling System Project 105
Bartlesville Total Guidance Information support system — Oklahoma 106
Autocoun — Palo Alto, California 106
Man-Machine Counseling System — Los Angeles 108
Career Decision-Making — Palo Alto 108
Follett Counseling Information Service (FCIS) 109
Computer-Assisted Occupational Guidance (CAOG) — Pennsylvania State University 110
Computer Assisted Vocational Information System (CVIS) — Willowbrook High School, Villa Park, Illinois 111
Intellectual Growth and Vocational Development 112
SCOPE — School to College: Opportunities for Post-Secondary Education 113

IMPLICATIONS FOR PRACTITIONERS 113
Problems 113
Potentialities 115
Summary 116

Chapter V

GUIDANCE AND VOCATIONAL EDUCATION 117
Area Concept 119
Federal Programs 120
Professional Organizations 121
RICHMOND Pretechnical Program 121
Work and Study for Functional Living 122
Realistic Training for "Families of Skills" 123
The Specialty-Oriented Student 124
Other Programs 124
Summary 126

Chapter VI

NEEDS, CONCERNS, AND CHALLENGES 127
CAREER GUIDANCE AND NEW SCHOOL ORGANIZATION 129
Flexible Modular Scheduling 129

Interdisciplinary Approaches 129
Vocational Aspects of Guidance 130
Changes in Occupational Information 130
Curriculum Change 131
Educational Systems for the '70s 132
New Counselor Functions 132

CAREER GUIDANCE, TEACHER PREPARATION, AND COUNSELOR EDUCATION 133
Counselor Preparation for Vocational Guidance 134
Preparation in Curriculum 134
Action Programs 134
Teacher Preparation for Vocational Guidance 136
Teacher Training Curricula 136
Interdisciplinary Models in Higher Education 136
Opening Communication Channels 137

PUBLIC ATTITUDES TOWARD CAREER GUIDANCE 137
Valuing Students' Vocational Concerns 138
Counselor Attitudes 138
Strategies for Change 139
Career Development as Self-Development 140
Summary 141

References 143

Supplementary References 155

Subject Index 176

INTRODUCTION

The "state-of-the-art" of career guidance in the schools — more commonly known as vocational guidance — is in flux. While there are many on-going activities and programs intended to help young people seek, explore, and find an occupational identity, it is generally conceded that much of what has occurred in vocational guidance in the schools has not kept pace with what has been learned from career development and sociological research about how youth develop and about new technologies which have increased the access to and amount of information available in career exploration. Aware of this gap, many teachers, counselors, and administrators are attempting to update curricula and improve services to young people in the hope of doing a better job of helping them "discover what it is possible to become" (U.S. Department of Labor, 1966, p. 39). It is for these people-educators concerned about the vocation guidance of youth — that this monograph has been developed.

The following pages resulted from a search which began in June, 1967, to determine what is being done in the nation's schools in the vital area of career guidance. Under the sponsorship of the ERIC Counseling and Personnel Services Information Center at the University of Michigan, the investigator surveyed state departments of education, professional journals, research reports, colleges and universities, conference reports, vocational guidance specialists, and individual school systems to obtain information about practices in career guidance. Although the response was voluminous, the monograph was not intended to be either comprehensive or exhaustive; neither was it intended to be evaluative. Rather, an attempt was made to *select* from the numerous materials received those innovative or "tried and true" programs and techniques which seemed most relevant to the topic and which were related either directly or tangentially to the school curriculum or to career guidance in the school setting. Although an attempt was made to select programs which seemed congruent with career development principles, not all of the procedures or programs tie in with current conceptualizations. Their inclusion was on pragmatic grounds, i.e., they "worked." Thus, the criteria for selection of materials, programs, and practices might be summarized as follows:

1) Practicality or utility for school personnel,
2) Illustrative or representative nature,

3) Relevance to career guidance in the schools,
4) Innovative or "tried and true" characteristics,
5) Pertinence to career development principles.

The monograph has been organized into six chapters. The first chapter briefly summarizes vocational development concepts and principles which seem most relevant to school career guidance practice. The second describes developmental or sequential practices and programs which are in progress or being developed in both large-city and smaller school systems, at both elementary and secondary levels. Chapter three presents school-community projects for students, teachers, and counselors which go beyond the school walls, yet are integrally related to the school program. Chapter four discusses projects which utilize multimedia, computer technology, simulation, and other innovative techniques (some of which are in the research rather than implementation phase, but have important implications for vocational guidance). Some of these techniques relate to the gathering, storing, processing, and dissemination of occupational information, while others focus more on the use of occupational information in counseling and teaching. Chapter five presents special concerns central to vocational education and examples of programs, materials, and procedures developed by vocational educators, often in cooperation with counselors. Chapter six presents issues, concerns, and challenges for career guidance in relation to new organizational patterns in schools, counselor and teacher education, and to public attitudes.

Because of the desire to make this volume as practical and self-contained as possible, there have been included a number of course outlines, recommendations, lists of objectives, and the like, which it is hoped the user might adapt or utilize in trying to develop and implement programs.

The author is indebted to the many individuals and institutions who in various ways contributed to the preparation and development of this monograph: to consultants, colleagues, and students; to Mrs. Carla S. Hill, who typed the manuscript; and most of all, to her husband for his patience and encouragement and to her two-year-old daughter and baby son who she hopes will be but two of many youth in the next generation to benefit from the ideas, programs, and practices described in these pages.

Chapter I

PRINCIPLES, TRENDS, AND CONCEPTS OF CAREER DEVELOPMENT

The vocational development of youth and the preparation and guidance they receive for the work world is the focus of this monograph. It has developed out of a conviction that a better job of career guidance will help to solve some of the problems of alienation and relevance which face the schools today. It has evolved from the belief that more constant and systematic attention to the changing world of work and to its effects on the life style of individuals may enhance life's chances and possibilities for self-fulfillment.

It is not the purpose here to review the literature of career development theory and research, although theory-making has been vigorous since the 1950s. It is important, however, to identify some of the main research thrusts, trends, and concepts to provide a framework for developing and implementing programs. This chapter attempts to provide such a context.

In recent years, especially under the impetus of federal legislation such as the Vocational Education Act of 1963 (VEA) and its subsequent 1968 amendments, the Elementary and Secondary Education Act of 1965 (ESEA), and the Economic Opportunity Act of 1965, there has been increased concern about the career guidance of youth. This concern has been expressed by parents, counselors, vocational educators, public officials, business, and industry. One of the charges, often substantiated by examination of practices in the schools, is that schools have not kept pace with current career development concepts.

While this criticism would appear to be true, it should also be pointed out that much of the research has been on theories of vocational choice-making, which have not appeared to have a direct impact on guidance practice. Of greater relevance to practice are emerging principles of vocational development which can be translated into school and community programs.

Among those who have addressed themselves to the task of clarifying and conceptualizing principles of career development relevant to the schools are

Katz, Borow, and Tennyson. An examination of the meaning of "career guidance," of the principles of career development, and of pertinent research should help to provide a framework for programs and projects.

Definitions

In an attempt to reconceptualize vocational guidance for the National Vocational Guidance Association, Katz identifies several elements which aid definition. He suggests that one "cannot discuss what vocational guidance is (content), without indicating what it does (process), what it is for (purpose), who is involved (participants), in what place and at what time (setting) [Katz, 1966b, p. 3]." He defines the content of vocational guidance as "the choices that our society permits among educational and occupational options [Katz, 1966b, p. 6]." Most people face a sequence of choices, although the choices vary from one individual to another. The choice may be determined by such factors as the educational system, the labor market, certification and licensing requirements, union regulations, economic conditions, military conditions, and labor laws. It is the responsibility of guidance to help individuals discover opportunities for choice and, perhaps, in some instances, to accelerate the readiness for choice-making — particularly for those to whom these choices seem neither available nor apparent.

There has been some disagreement about the term vocational guidance. Some believe that it is too restrictive, that it separates vocational development from total development and implies a traditional view of vocation as a commitment or "call." Others believe that the term should not include educational decisions which involve more than choice of, or preparation for, an occupation.

A more comprehensive term, one which this author endorses, is "career guidance." This term suggests that all major choices — of education, of occupation, of leisure — are part of a larger pattern contributive to life style [Katz, 1966b, p. 9]. Those who advocate this term see the process of vocational development as a continuous one, one which is essentially that of developing and implementing a self-concept (Super, 1953).

Career

Katz (1966b) differentiates between vocation, occupation, employment, avocation, and 'non-work' as different types of career. *Vocation* usually implies a dedication or long-term commitment, with a high level of requirements, rewards, and expectations. Most professional and managerial level jobs fall into this category and are characterized by long periods of preparation, delayed entry, a high degree of autonomy, limited leisure, and intrinsic rewards.

Occupation, a different kind of career, is less demanding, less consuming, and less fully rewarding. It occupies the worker for a period of time but does not require single-minded commitment. It requires differentiated training but may involve considerable retraining. The term is applied to the careers of lower-level professionals, semi-professionals, technologists, administrators, and skilled workers. There is a greater amount of leisure time available to those engaged in occupations, because their careers require less commitment [Katz, 1966b, pp. 30–31].

Employment, as another type of career, suggests less differentiation and education than occupation. Employed people are busy and paid, usually in still-existent production jobs such as monitoring machines. Employment requires little commitment and offers few intrinsic rewards. It requires time and attention, but no distinctive skill. The rewards of work tend to be extrinsic, and there is much time for hobbies, leisure, and associations [Katz, 1966b, p. 32].

Avocation allows the individual to pursue his interests and concerns without regard either to manpower needs or the vicissitudes of the labor market. Any individual whose career provides him with a means of livelihood and some leisure can find satisfaction, through his avocation, in areas of his life other than the vocational. Finally, *non-work*, as one type of career, is chosen by some, but is not generally accepted by society.

If Katz's model of vocation, occupation, employment, avocation, and non-work as basically different types of career holds validity, it has important implications for guidance. The basic choice among these, he suggests, is essentially a choice between values or value systems. By values, he means the manifestation of needs as expressed in such illustrative dimensions as "money-income, power-authority, stability-security, adventure-excitement-change, autonomy, knowledge-new ideas, altruistic service, prestige-fame-recognition, leisure time [1959]." The individual needs to know the "fit" between his value system and the rewards or satisfactions available in the various options [Katz, 1966b, p. 38]. He also needs to be aware of the need for compromise, because there is no perfect "fit." What this suggests to Katz is that the primary area of vocational guidance is the choice of goals. It further suggests that attempts to implement career guidance in the schools need to include early exploratory experiences in goal-seeking and decision-making.

Decision-Making Process

Although some would focus primarily on the process of decision-making in vocational guidance, Katz and others have pointed out that the existence of decision-making as a teachable skill has not been established. Katz does, however, set forth a rationale for guidance intervention in the choice or decision-making process. One of the elements the decision-maker needs is information. Yet, he may not "know what information he needs, does not have what information he wants, or cannot use what information he has [Katz, 1963, p. 2]." Freedom of choice and vocational maneuverability are enhanced when knowledge of all options is made accessible to all individuals. Katz sees the nature of the choices which an individual perceives and to which he responds as providing the terms in which he expresses his self-concept. The choices are usually related to one another (to both antecedent and subsequent choices) and generally form a sequence. An individual's evaluation of past performance and prediction of future performance represent his self-appraisals; his decisions and plans express his self-concept [Katz, 1963, p. 2].

Two key "choice points" during the exploratory junior-senior high school years are the eighth or ninth grade, when students are generally required by the educational system to choose a "track" or long-range high school curriculum, and the eleventh or twelfth grade, when students are asked to begin formulating post-high school plans. The model of guidance for career decision-making proposed by Katz consists of three data systems: an information system (a strategy for acquiring and processing information); a prediction system (a means for assessing the possibilities and probabilities for entry and success); and a value system (choice of goals and means for attaining them). Values are at the core of Katz's decision-making paradigm and, in his view, are the major synthesizing element in the choice process [Katz, 1963, p. 17].

Career Guidance Curriculum

Although a full-blown curriculum for career guidance has not yet been developed, Katz (1966b) has articulated eight areas which such a curriculum should include:

1) the individual's understanding and acceptance of his own responsibility for making career choices;
2) an understanding of the sequential nature of choices, including skill in reality-testing and in discerning the relationships between choices;
3) knowledge of options in the domain of human values;
4) recognition of predictable changes in value systems;
5) awareness of the full array of conditions of work and attitudes toward work;
6) some grasp of the rewards and satisfactions characteristic of each specific option at each choice point so that the individual can determine

the fit of these characteristics to his own values as he perceives them at that time;

7) awareness of the cost and consequences of each decision, including the investment, the risks, and the strength of return; and
8) knowledge and understanding of prediction data concerning probabilities of entry and success in each option considered at any choice point [pp. 42–44].

As a footnote to the career guidance curriculum, Katz suggests that it should also include ways and means of proceeding and a consideration of the choices to be made and the priorities to be established.

Among the unanswered questions in a vocational guidance curriculum are those relating to behavioral objectives, scope, sequence, and timing. These include questions such as:

> What specific attitudes, understandings, knowledge, and skills constitute "vocational maturity" at various ages? How should they be ordered? What content should be dealt with by the elementary school child, the junior high, the high school, college or graduate student? the dropout? the beginning apprentice? the journeyman? the mature adult? the unemployed? the handicapped? [Katz, 1966b, p. 45].

Research has begun to answer some of these questions, although Borow (1966d), too, has noted the lack of attention to behavioral objectives and to vocational development as learning. A number of reseach projects which are attempting to provide answers to curricular questions about vocational guidance are described in this monograph. These projects represent the beginning of attempts to implement aspects of a vocational guidance curriculum in the school.

Career Development Principles

While pointing out that theory-making and research have not contributed much to guidance practice, Borow (1966d) has identified several key principles of career development which have implications for curriculum and the schools:

1) *Life Stages Concept.* Buehler's idea of studying behavior according to a sequence of psychological life stages has given a developmental thrust to the analysis of vocational behavior. She suggests that vocational plans and decisions are not isolated events but part of a continuous process of development.
2) *Vocational Development Tasks.* Because of the influence of the life stages concept and Havighurst's articulation of developmental tasks, the emphasis has moved from a preoccupation with vocational choice

to a concern with occupational motives and behavior at each particular life stage. This emphasis suggests that it is possible to study occupational behavior, starting in the elementary school, without waiting for the first manifestation of choice in the decision chain. This may have implications for vocational guidance and particularly for occupational information [p. 4].

3) *Career Pattern Concept.* The notion of career pattern dispels the myth of a single career choice. Career pattern suggests a sequence of choices and movement from position to position over a span of time. It may involve decisions which are both psychological and socioeconomic and includes tentative choices and aspirations which long precede formal entry into the labor force.
4) *Occupational Choice and Identity Formation.* For most persons, making a vocational choice or seeking an occupational identity is viewed as a striving for a social and economic role consonant with the individual's self-image.
5) *Taking Occupational Roles.* As part of the socialization process, a child learns the values, customs, and expectations of his primary reference group. He imitates older children and adults who serve as his role models and, in so doing, explores (takes on) role models and experiences which help him to learn both the kind of person he is and would like to become. Some of the role-taking experiences may be important in shaping his concept of himself as a potential worker [p. 5].

Also of significance to school personnel are the generalizations suggested by occupational research regarding occupational development and motivation in youth. Among the most significant, summarized by Borow (1966d), are 1) early childhood traits and dispositions, which may affect later occupational behavior; 2) early ranking of occupations, which influences occupational preferences; 3) the limited and unreliable occupational information possessed by junior high school youth; 4) the lack of psychological readiness for specific vocational choice-making among junior high school youth; 5) the divergent meaning of work for the culturally deprived; 6) lack of opportunity for direct experience with work due to prolonged adolescence and economic dependency; and 7) evidence of a set of biases against certain work fields which prematurely restrict the range of choices, resulting in "subjective occupational foreclosure [pp. 7–10]."

Societal Trends and Influences

The tendency in American society to postpone employment and exclude youth from the labor force accentuates the need for direct or simulated work exposures during the school years [Borow, 1966a, p. 375]. In seeking to understand occupational roles and motives (rather than choice *per se*), those concerned about vocational guidance must look to labor economics, vocational and industrial sociology, and vocational development. They must be aware of significant trends in the labor force, such as 1) the transition from goods-producing to service industries, 2) the increase in technician and professional level jobs, 3) the increasing proportion of women in the labor force, and 4) the increasing requirements for more education and training. To these, Borow adds the following societal trends which hold relevance for career guidance:

1) formal education has become more important;
2) youth are walled off early from labor force participation;
3) an increasing number of jobs are more complex or are found in large-scale, impersonal organizations;
4) youth has broadened freedom for personal decision making; and
5) technology is changing the meanings of work [1966c, p. 23].

Borow also points out the need to look at family influences such as socioeconomic status, occupational prestige, and level of aspiration (1966a, p. 390). This is especially true for the culturally disadvantaged. Borow believes that the research emphasis should attempt to describe and account for the "manner in which youth grow up vocationally." He points out that children's knowledge of occupations and level of vocational development tend to rise as socioeconomic status, intelligence, and school grade level rise. Research has indicated, too, that parents and teachers are most frequently mentioned as influences on youth in occupational choice, although counselors are being mentioned more often. Experience on an outside job also seems to influence specification of career choice [Borow, 1966c, p. 31]. All of these influences on occupational attitudes need to be considered in developing practical programs of vocational guidance.

Pertinent Theory and Research

What is some of the most relevant research from which principles of career development derive? Super was one of the first to emphasize "career," which he describes as "a sequence of occupations, jobs, and positions throughout a person's working life [1967, p. 3]." He is also credited with conceptualizing vocational development as a process of developing and implementing a self-concept. His longitudinal Career Pattern Study of Ninth Grade Boys has focused on sequential patterns and vocational development tasks at different life stages. He has stated, several times, the basic principles of career development which form a framework for his theory. The following twelve propositions have generated much research, and several of them have important implications for vocational guidance practices with youth and adults:

1. Vocational development is an ongoing, continuous, generally irreversible process.
2. Vocational development is an orderly, patterned, and predictable process.
3. Vocational development is a dynamic process.
4. Self-concepts begin to form prior to adolescence, become clearer in adolescence, and are translated into occupational terms in adolescence.
5. Reality factors (of personal characteristics and of society) play an inincreasingly important part in occupational choice with increasing age, from early adolescence to adulthood.
6. Identification with a parent or parent substitute is related to the development of adequate roles, the consistent and harmonious interrelationship of these roles, and their interpretation in terms of vocational plans and eventualities.
7. The direction and rate of the vertical movement of an individual from one occupational level to another are related to his intelligence, parental socioeconomic level, status needs, values, interests, skill in interpersonal relationships, and the supply and demand conditions of the economy.
8. The occupational field which the individual enters is related to his interests, values, and needs, the identifications he makes with parental or substitute role models, the community resources he uses, the level and quality of his educational background, and the occupational structure, trends, and attitudes of the community.
9. Although each occupation requires a characteristic pattern of abilities, interests, and personality traits, there are tolerances wide enough to allow some variety of individuals in each occupation and some diversity of occupations for each individual.
10. Work satisfactions and life satisfactions depend on the extent to which the individual can find adequate outlets for his abilities, interests, and personality traits in his job.
11. The degree of satisfaction the individual attains from his work is proportionate to the degree to which he has been able to implement his self-concept.
12. Work and occupation provide a focus for personality organization for most men and women; although for some persons, this focus is peripheral, incidental, or even nonexistent, and other foci such as social activities and the home are central [Super, 1967, pp. 28–29].

Notions of stability and change in career patterns are also important to those guiding youth in vocational exploration. Miller and Form (1951), drawing on Buehler's life stages, classified career life stages and identified work periods which they named the initial (while still in school), trial (early full-time work which is often short-lived), stable (normally in mature adulthood), and retirement (after giving up employment). Their sociological analysis of stability and change in the careers of factory workers showed that some men may continue to change occupations and/or jobs throughout life, while others have stable periods followed by new periods of trial leading to stabilization for a second or third time [p. 5]. They also found that men at higher socioeconomic levels had more stable and conventional career patterns, while those at lower socioeconomic levels more commonly had multiple-trial and unstable patterns. Super points out that guidance programs and needs typically have been built around notions of stable occupations and matching of individual and job, whereas, "nearly half of the students we see in high school — many of whom will be semi-skilled workers — will have unstable or multiple-trial careers [1967, p. 6]." What is needed, he suggests, is "a *career model* in which the individual is viewed as moving along one of a number of possible pathways as he progresses through the educational system and into and through the world of work [1967, p. 9]."

The clarification, crystallization, and stabilization of self-concepts have been investigated by Tiedeman and O'Hara (1963). Elaborating on the work of Super and focusing also on vocational self-concepts, they conceive of vocational development as the choosing of successive positions, each of which is related to previous and subsequent choices, which form a means-end decision chain. The focus is on the major positions a person occupies in the course of a lifetime and the role expectations that go with these positions.

Also contributing to school-relevant theory, Crites (1965) has examined the concept of vocational maturity and has developed a series of tests for measuring it. He has prepared a Vocational Development Inventory consisting of an attitude test and a competence test. The former is a 50-item scale of statements about 1) involvement in the vocational choice process, 2) orientation to the world of work, 3) independence in decision-making, 4) preference for sources of job satisfaction, and 5) conceptions of choice and work. The Competence Test is made up of five parts: a Problems Test, designed to measure the ability to resolve conflicts between the factors in vocational choice; a Planning Test, designed to order scrambled series of steps leading to various vocational goals; an Occupational Information Test, including items on job duties and tasks, trends in occupations, and future employment opportunities; a Self-Knowledge Test, scored against standardized test information for accuracy of estimated vocational capabilities; and a Goal Selection Test, in which the student is required to choose the "best" (most "realistic") occupation for a hypothetical individual described in terms of his aptitudes, interests, and personality characteristics [p. 8]. When validated and available, these instruments may prove to be useful tools for counselors and teachers involved in career guidance activities.

Gribbons and Lohnes (1966) have developed a "Readiness for Vocational Planning" (RVP) scale based on the following interview variables: 1) awareness of factors in curriculum choice, 2) awareness of factors in occupational choice, 3) verbalized strengths and weaknesses, 4) accuracy of self-appraisal, 5) evidence for self-rating, 6) awareness of interests, 7) awareness of values, and 8) independence of choice [pp. 25–26]. They have undertaken a longitudinal study of 111 boys and girls to determine whether their career patterns follow a sequence of developmental stages. They are following their subjects from eighth grade to two years beyond high school, with repeated personal interviews at scheduled intervals. They hope to answer such questions as:

> What is the role of intelligence in choosing, entering, and remaining in an occupation? What is the role of values in making choices? What is the impact of value shifts as they occur with maturation? What effects do familial and societal pressures have in shaping occupational aspirations? [p. 9].

The Gribbons and Lohnes study provides educators with a better idea of what is meant by vocational readiness and vocational maturity. Their findings, using the RVP Scale with eighth graders, provide some support for career planning in the junior high school.

In reviewing the most recent career development literature, Tennyson (1968) sees investigation in this field as "concerned with trying to understand the socialization process required to transform the child into the working adult as well as to discover the manner in which work is related to the life styles of adults in the labor force [p. 346]." He points out that much of the present knowledge cannot be generalized to large segments of the population, including women and the disadvantaged. He suggests that the research on career decision-making "raises serious questions about the wisdom of imposing vocational directions or curriculum choices upon adolescents while in high school [p. 353]." And further, "The number of students making decisions based upon irrelevant and inaccurate information, and the pattern of choice change during the early adult years, argue for flexibility in educational programming [p. 353]."

Tennyson cites some significant studies regarding the "influences" of vocational choice and behavior — e.g., that formal education is becoming a more potent factor than father's occupation in the son's level of occupational achievement (Duncan & Hodge, 1963); that the counselor can affect and shape attitudes (Krumboltz & Varenhorst, 1965); that the family is a highly significant reference group (Elder, 1963; Kinnane & Pable, 1962); that lower class boys and girls are less able to supply appropriate job titles to stimulus figures, suggesting that some job models lack relevance for the economically deprived (Clark, 1967); that children between 6 and 13 increase their knowledge of occupational roles and status, and that personal contact is more effective than either television programs or general culture (DeFleur, 1963) [1968, p. 354].

For those interested in further reading on vocational choice theory, the following are recommended: Osipow, S. H., *Theories of career development*, and Holland, J. L., Major programs of research on vocational behavior, in H. Borow (Ed.), *Man in a world at work*.

Tennyson's review reflects the fact that little research has been done on curricular programs in vocational guidance, possibly because few systematic programs exist. A number of experimental programs are in progress, but while many practices have been developed, there has been a paucity of empirical studies which evaluate the effectiveness of these programs and techniques with students. There exists a serious dearth of evaluative research on behavioral outcomes, but this is due, in part, to the fact that the behavioral outcomes of vocational guidance have not heretofore been specified, as both Borow and Katz recommend. If there can be agreement on criteria for evaluating outcomes, answers can be sought empirically. However, someone will have to identify what constitutes progressive mastery of the content of vocational guidance. Also needed are good standardized instruments for measuring outcomes in relation to objectives at each stage of career development [Katz, 1966b, p. 47].

Perhaps even more important, as Super, Borow, and others have suggested, is the need to help youth develop a sense of planfulness or agency, a responsibility for management of their own lives. To stimulate and facilitate, through guidance experiences, an occupational awareness and self-knowledge in a society from which many youth have been alienated is part of the task of both school and community.

Currently, Tennyson and Klaurens (1968), under sponsorship of the Minnesota Department of Education, are involved in identifying some of the behavioral objectives of a career development curriculum and in developing a rationale, enabling objectives, and innovative teaching-learning approaches to meet those objectives. One learning experience in a summer institute for counselors and distributive education teachers at the University of Minnesota was that of taking 133 previously identified career development objectives and planning exploratory experiences to meet them. The next step is to try to spell out the sequence and timing of these objectives and attempt to place them at appropriate developmental levels. When these are available, they should help to close the gap between theory and practice.

Conferences

Concern about vocational guidance has been translated into action through a number of conferences designed to explore the problems of improving vocational guidance services, to examine the role of various workers involved in helping youth find vocational identity, and to find ways to implement research findings in the school setting. A conference designed to deal directly with the problems of "Implementing Career Development Theory and Research through the Curriculum" was held at Airlie House, Warrenton, Virginia, in May 1966, under the sponsorship of the National Vocational Guidance Association. (Tennyson and Ashcraft, 1966) The conference brought together career development theorists, sociologists, psychologists, counselor educators, vocational educators, and curriculum specialists to engage in dialogue and identify ways of moving from theory to practice. There was considerable agreement among participants that past approaches were inadequate and that efforts to update practices were sparse. One very important suggestion was the need to replace traditional vocational guidance activities predicated on a one-shot, final choice basis with a sequential series of experiences, beginning in the elementary school and continuing periodically through the exploratory years of junior and senior high school and into adulthood. Many of the delegates left the conference with the specific task in mind of trying to develop such a career development program, which would become a part of the school curriculum.

The Center for Research and Leadership Development in Vocational and Technical Education at Ohio State University has organized several seminars to explore various aspects of vocational guidance. A comprehensive examination of the psychological, sociological, and technological aspects of the world of work and vocational guidance characterized the National Interdisciplinary Seminar on "Guidance in Vocational Education" in January 1966 (Campbell, 1966). Aimed primarily toward postsecondary noncollege youth, it brought together vocational educators, counselor educators, manpower specialists, occupational sociologists, information systems specialists, measurement specialists, and other personnel to explore mutual problems and concerns. Most pertinent are Tennyson's "Guidelines for Practice" which, although written as a summary for the conference, have more general implications for career guidance in the schools. The guidelines are as follows:

1. Guidance is a process of helping the individual to examine his life ex-

perience to the end that he may know and choose himself and his actions more clearly and purposefully.

2. Both teachers and counselors have roles to play in guidance, but the counselor should make a unique contribution to the vocational program.
3. The educational-vocational framework provides the most logical rationale for pursuing the discovery of self.
4. The criterion to be employed in defining the role and functions of the counselor in vocational education is psychological consistency.
5. There is a job for both vocational educator and counselor in providing experiences which enable the student to identify suitable social work-roles.
6. The myth of the individual with a single occupational value can no longer be supported as a basis for vocational guidance practice.
7. Guidance in vocational education cannot escape its responsibility to develop the abilities and talents of all individuals [1966, pp. 159–161].

A conference on "Occupational Information and Vocational Guidance" held at the University of Pittsburgh in March 1966 was devoted to curriculum-centered techniques of vocational guidance geared to the non-college-bound (Martin & Hummel, 1966). Another more specialized seminar dedicated to the topic "Systems Under Development for Vocational Guidance" was held at the Ohio State University Center in August 1966. This seminar, labeled a "Research Exchange Conference," brought together people involved in research related to computer-assisted counseling, gaming techniques, and communication media (Campbell, Tiedeman, & Martin, 1966).

The National Seminar on Vocational Guidance held in August 1966 (Odgers & Gysbers, 1966) was sponsored jointly by the American Vocational Association and the American Personnel and Guidance Association. It was one of the first conscious attempts to continue the dialogues among all those involved in the vocational guidance of youth, including state supervisors of guidance and vocational education; counselor educators; occupational information specialists; leaders of professional organizations; business, labor, and community leaders; and those involved in action programs of improving vocational guidance services at state and local levels. In a follow-up study of the seminar, Odgers (1968) reports a wide variety of positive outcomes attributed to or receiving implications from the seminar, including counselor education workshops and conferences, new occupational information publications, improved relationships with related professions, business and industry research and development, and improved state-level organization and services.

Several conferences devoted to the training and preparation of counselors for vocational guidance have been held, notably the conference on "Vocational Aspects of Counselor Education," at Airlie House, Virginia, in December 1965, under the auspices of George Washington University (McDaniels, 1965), and the AVA-APGA sponsored "National Seminar on Vocational Guidance," at the University of Missouri in August 1967 (Gysbers & Joslin, 1967). A conference designed to examine problems related to the preparation of counselors for postsecondary guidance was held in Chicago in March 1966, under the auspices of the College Entrance Examination Board (1967). The guidance needs of all types of students planning for all types of education beyond high school were discussed. The inadequate help given students and the lack of counselor preparation in this area were emphasized. All three conferences examined some of the competencies needed by counselors involved in career guidance and suggested revision and improvements in training approaches and programs.

In many ways, it can be said that several of these conferences have laid the groundwork for some of the research, innovations, trends, and practices which are slowly finding their way into the school curriculum. In summarizing several of the above conferences, Borow noted the following needs and trends:

1) Guided experiences in the cultivation of career development will become more common in the early stages of formal schooling.
2) One-to-one counseling will be steadily supplemented by a variety of career guidance programs, including those centered in the curriculum, which will broaden and enrich youth's productive encounters with the environment.
3) The interdisciplinary approach to career development will grow both in research and practice. The link between vocational guidance and vocational education will become stronger.
4) The dissemination and use of occupational information and of career development research findings will be improved and extended through computer-based information systems like the ERIC Clearinghouse on Counseling and Guidance.
5) The devising and pilot testing of systematic career development and vocational guidance programs will become more prominent. The installation and evaluation of experimental guidance systems in natural school and community settings will be accorded a higher priority than in the past.
6) Much more attention will be given to the development of a wide variety of research-based vocational guidance instructional materials to implement the principles of career development which are now beginning to receive wide acceptance.
7) The curriculum of counselor education will attach new importance to

> career development principles and vocational guidance practices. This instructional change will subsequently be reflected in the increased quantity and quality of vocational counseling and career guidance activities, particularly in the schools [Odgers & Gysbers, 1966, pp. 27–28].

That Borow was not thinking of the year 2000 when he discerned these needs and trends is evident. Many of the trends he cited are already in progress as research and pilot projects, and these may serve as a stimulus to other school personnel interested in closing the gap between career development principles and career guidance practice.

There can be no doubt that administrators, teachers, and counselors must be involved in career guidance, but counselors have a unique contribution to make. A report of the Subcommittee on Career Guidance of the U.S. Department of Labor's Committee on Specialized Personnel [1966, pp. 1–11] lends further support to career guidance in the schools and identifies several needs:

A. To understand better the process of guidance, particularly as it affects career choice, and to understand better the phenomena to which it relates. It is to be hoped that such understanding would lead to an effective analysis of the process of guidance permitting identification of the counselor's roles and those of other personnel.

B. To insure that career guidance pervades the entire educational process.

C. To increase the number, quality, and effectiveness of counselors and others who can take a significant part in the guidance process; and to extend their role within and outside educational systems. Included would be:

   1. Equipping every teacher, from the early grades up, with a basic capability to help his students relate to the world of work through unbiased career information and encouragement to develop.
   2. Utilizing support personnel who are not professional counselors to perform tasks in the guidance process not requiring the services of a professional counselor.
   3. Increasing the numbers, effectiveness, and availability of guidance personnel in relation to the working population throughout their work life.

D. To develop approaches that will more effectively coordinate teaching and guidance with the world of work, including use of community resources to supplement and reinforce the guidance that guidance personnel in the school can provide.

E. To improve manpower and occupational information services to facilitate career-related decision making. Full use of modern technology in the gathering, storage and retrieval of information is indicated.

Among the subcommitte's pertinent recommendations for improving guidance practice are the following:

1) In view of the natural and inevitable role of the teacher in providing guidance, and because the majority of school counselors are drawn from the teaching profession, more reality-orienting content should be included in the experiences of teachers-in-training, so that they may become more effective partners to counselors in the total process of education.
2) Programs of continuing education should be used more extensively to recruit and equip unemployed and underemployed adults in the community to fill appropriate roles in guidance.
3) In view of the shortage of guidance services, every means possible should be used to encourage the appropriate use of subprofessionals in the guidance process, and to provide clerical and other assistance to counselors. The use of subprofessionals will require, in addition to adequate programs designed to train them, appropriate tables of organization for the schools and agencies which use their services.
4) The counseling profession must play a major part in assuring the provision of adequate career guidance as a significant factor in helping the individual find personal adjustment.
5) Intense efforts are needed to meet the needs of underutilized, unemployed, and/or disadvantaged groups for guidance, counseling and other supportive services in order that their talents may be identified, energized, developed and utilized.
6) A new way must be found to screen supporting materials concerning specific vocations and have them readily accessible both to students and counselors on demand.
7) The school counselor should draw much more extensively upon the huge latent resources of the community to assist in providing career guidance.
8) Proposals should be solicited from industry, the universities, and elsewhere for the formation of task forces that could provide a strong nucleus of experts to assist local communities in enriching their guidance programs.
9) Support should be given to inserting reality into the learning experiences of students by the use of games, simulations, and role-playing experiences in schools. Counselors should take the lead in adopting these techniques where they show promise.
10) The counseling profession should exploit modern information technology to supplement its individual and personal approach to guidance.

Implications for Practitioners

What do all these definitions, principles, trends, research projects, and conferences suggest to the practitioner in the field? Although it would be impossible to summarize all of the implications, some key ideas seem to recur:

1) Career development is a continuous, developmental *process*, a sequence of choices which form a pattern throughout one's lifetime and which represent one's self-concept.
2) Personal meanings or psychological determinants of work (what it means in the life of an individual in relation to his values and life style) may be far more important than external job characteristics.
3) Career development involves a synthesis or compromise, a reality-testing which involves role identification, role-taking, and role exploration, assessment of self and of opportunities and of the economic conditions in society.
4) Career patterns of individuals may be influenced by intelligence, sex, location, socioeconomic level, economic conditions and the changing nature of the world of work in an advanced technological society.
5) Career development is part of human self development, involving different developmental tasks at various life stages, and individuals varying in their readiness for such tasks or their vocational maturity (Hansen, 1967b).

Following from these are certain assumptions which might undergird a new approach to vocational guidance in the schools:

1) An integrated, cross-disciplinary program of career guidance as part of the regular school curriculum (K-12) is more consonant with new knowledge about vocational development than some of the isolated, one-shot approaches such as career days, college days, and once-a-year units.
2) It is possible to plan a series of vocationally relevant exploratory experiences or exposures which have meaning for the career development of adolescents; certain kinds of appropriate experiences can be defined at various levels and stages of student growth. This takes into account individual differences in "readiness," "needs," "goals," "values," and "planfulness" which need to be considered in developing a program.
3) The curriculum needs to be interpreted broadly to include kinds of experiences which bring the world of school and the world of work closer together. What this means is that more creative, imaginative, meaningful activities need to be planned which extend beyond school walls and beyond traditional subjects.
4) An integrated program has, as its goal, not the encouragement of the

student to make a specific vocational choice but, rather, the fostering of an understanding of the variety of potentialities in self and society which might be fulfilled through career. This implies development of an occupational awareness and a sense of planfulness regarding one's own life. It may mean preparation for change, flexibility, and adaptability.

5) An effective program of career guidance involves the total school staff and the community — counselors, teachers, parents, PTA, business, and industry — in planning meaningful exploratory experiences, developing more varied and appropriate occupational information, and providing for adequate synthesis and reality-testing through the integration of information about self and work [Hansen, 1967b, p. 99].

As will be evident from the following chapters, a number of schools and communities already are involved in exciting projects which implement some of the career development principles and concepts. These projects and practices which are trying to bridge the gap could be classified as: 1) curricular approaches and programs; 2) school-community cooperation and involvement; 3) projects utilizing advanced technology; and 4) gaming, simulation, and other innovative techniques. Some of these are attempts at setting up a developmental curriculum in career guidance. Others are special activities such as career conferences, which have replaced career days. Several of the projects are both intramural and extramural, involving within-school time and personnel as well as community, business, and industry. Although many of the projects utilizing computers and multimedia are still in the research, development, and conceptualization stages, there are some in actual operation. The vocational simulation kits and life career games being tried in a number of schools are among the newer procedures. While the millennium in career guidance is far from here, the fact that researchers and school personnel are taking the time to evaluate vocational guidance practices, refine programs "that work," and pilot new and innovative approaches presages well for the assistance the youth of tomorrow can expect in their career development.

Summary

It has been the purpose of this chapter to identify some of the key aspects of career development principles and concepts and societal trends which seem most pertinent to career guidance practice in the schools. Katz, Borow, Tennyson, and others have been cited as addressing themselves directly to the identification and translation of career development principles into practice. Some criteria for ascertaining vocational readiness and vocational maturity have been described. Results of conferences devoted to career development and vocational guidance were reported, with current needs and future trends noted. Recommendations of the Labor Department's Subcommittee on Career Guidance were presented. Among the principles having implications for practitioners are: 1) career development is a continuous process; 2) it involves synthesis or compromise; 3) it has psychological meanings to an individual; 4) the career pattern may vary for individuals; and 5) career guidance is a part of total self development. Assumptions which undergird new approaches include: 1) the need for an integrated, interdisciplinary approach to career guidance in the curriculum; 2) the feasibility of planning a sequential series of exposures; 3) the need for closer school-community cooperation; 4) the need for broad exploration and preparation for adaptability; and 5) the involvement of total staff and community.

Chapter II

PRACTICES AND PROGRAMS IN THE SCHOOLS

It has been suggested that career guidance should pervade the entire school, possibly taking its major form in a sequential, integrated curriculum from grades kindergarten-12 (Baer & Roeber, 1964; Hoppock, 1966). Although such a comprehensive curriculum has not yet been developed, several projects aimed at such a program are under way. Slocum suggests:

> Much of the floundering of young men and women in occupational decision-making is unnecessary. We have the necessary agency — the public school system — and the knowledge — from social and behavioral research — to introduce a much greater degree of rationality into occupational choice and preparation. What adolescents need most of all is a conceptual map of the world of work for use in interpreting information about occupations and in understanding the probable consequences for careers of alternative occupational and educational decisions. This can be communicated most effectively through a program of occupational guidance through the curriculum [1967, p. 1].

"Vocationally Relevant Behaviors Desired for Youth" have been identified by McDaniels (1965) as including:

1) Appreciation of work as a valued and enduring social institution ("work" broadly conceived).
2) Acceptance of the responsibility for one's vocational planning.
3) Knowledge of educational and vocational resources.
4) Understanding and acceptance of significant data about self.
5) Understanding of the kinds of data required for self-appraisal.
6) Understanding and use of resources to maximize self-potential.
7) Understanding the inter-relatedness of occupations (e.g., job family concept).
8) Understanding of occupation as a major determinant of life style (e.g., occupation as a way of life).
9) Ability to perceive and accept life experiences as reality testing.

10) Awareness of consequences of decisions and the disposition to accept them.
11) Awareness of decision-making as a chain process.
12) Ability to deal selectively with the environment by modifying it or adapting to it, as circumstances require.

Some of the understandings, skills, and knowledge needed by a student in a developmental curriculum have been outlined by Hansen (1967) as follows:

1) Knowledge of the nature of career development itself — a process which is psychological, tentative, continuous, and changing.
2) Knowledge about the structure and trends of the labor force — obsolescent jobs, demand fields, new occupations, cybernation, and automation.
3) Skill in the process of decision-making — understanding of the possible, the probable, the desirable, the risks, and the strength of return of certain options.
4) Skill in synthesizing self-appraisal data and career information into a meaningful concept of self — developing exploratory hypotheses, testing them out, and evaluating them in relation to one's abilities, values, and goals.

Hansen suggests that each school should develop its own tailormade program of career guidance activities and exploratory experiences to meet the needs of its particular student population. The projects undertaken by a few school systems, large and small, to meet these needs will be described.

PROGRAMS OF DEVELOPMENTAL OR SEQUENTIAL CHARACTER

A few systems have developed research or pilot projects which attempt to provide career guidance in a systematic, continuous way at various points in a student's career. Some of them represent major large-city programs with joint federal and local funding, while others are attempts within individual schools to improve career guidance services to students. Some illustrative examples of both kinds of programs are described.

The Developmental Career Guidance Project — Detroit

One of the most comprehensive projects is the Developmental Career Guidance Project (DCGP) in Detroit, funded by the Office of Economic Opportunity and co-sponsored by the Detroit Public Schools, Wayne State University, Plans for Progress, and College Entrance Examination Board (Leonard, G., 1968). Under the direction of George Leonard since 1964, the project has developed a variety of sequential activities involving both the school and the community in a program geared to the needs of selected inner-city youth. Purposes of the DCGP are 1) to raise and broaden occupational goals of students in disadvantaged schools in Detroit, 2) to develop a pilot project to better meet the needs of inner-city youth through emphasis on educational-vocational career guidance in grades 1–12, 3) to involve the staffs of the participating schools through cooperative planning and development, and 4) to systematically evaluate the program through analysis of student plans and attitudes. Each project school has a guidance team consisting of a guidance consultant, a career community aide, and student assistants who, together with principals, teachers, project staff directors, and special consultants, work with students and their parents.

The specific objectives of the program are 1) to broaden the perceptual field of inner-city youth regarding occupations, 2) to help overcome the lack of planning for the future, and 3) to provide better role models. Phase 1 of the project, a workshop, attempted to orient school personnel to the special needs and characteristics of inner-city youth, as well as to community agencies, institutions, and employers.

Kinds of activities carried on in the project schools include 1) individual and group counseling; 2) dissemination of educational and occupational information through individual classes and special assemblies; 3) broadening of perceptions through weekly field trips to industries and speakers invited to the school; 4) work with parents, both informational and advising; and 5) work with the community, particularly through close liaison with community agencies and neighborhood organizations. Attempts are being made through teachers at all levels to relate subject matter with the world of work and self-development (Leonard, G., 1968).

The major purposes of the varied assemblies sponsored by the DCG Project have been to provide role models for students, to impart vocational information, to stimulate greater teacher and parent involvement, and to utilize community resources. The junior high school assemblies have helped students to explore broad occupational fields, from professional to unskilled. Senior high school assemblies have focused more on specific occupations and job requirements.

Field trips for all students, especially for the unmotivated and uninterested, have provided another type of experience. According to the director, "Things that formerly happened to students only rarely and by accident were made to happen often and by design [Leonard, G., 1968, p. 45]." Orientation is provided before each field trip and follow-up, after. When schedules permit, teachers accompany classes. Guidance consultants go on most trips, as do community and student aides and some parents. The trips have been judged exceedingly valuable by the staff.

Group counseling has been done with secondary school students. For one period per week for 15 weeks, students met with a counselor in the fall and spring. In one junior high school, the guidance consultant met regularly with a group of boys with behavioral problems. The consultant also became involved in individual counseling regarding career choice and job placement. Group "press conferences" were scheduled in which representatives from business or industry were invited to the school to be interviewed by students interested in their particular job or area of expertise.

One of the most unusual of the activities has been the establishment of a simulated employment office called the School Employment Security Commission (SESC) in one project elementary school. Fifth-, sixth- and, later, fourth-graders were encouraged to apply for various jobs available in the school building, including Safety Squad, Service Squad, Boardwashers, Audio-Visual Aides, and Office Helpers. Some students were trained as job interviewers, application forms were designed, and lists of job openings and qualifications were posted. The SESC handled 25 applications per month after its opening and provided practical preparatory experience in job-seeking for elementary students (Leonard, G., 1968).

An all-school career conference, based on the theme "Things Are Changing," was held for the senior high schools, with attendance by representative groups of students from feeder schools (two junior high and three elementary schools). Forty career representatives formed panels (some discussions were taped) to allow for close interaction with students.

Among articulation activities with business and industry was the sponsorship of each project school by a local company or corporation. Each company sponsored a dinner for the total staff of each school where business employees, teaching staff, administration, and project personnel could interact. Guidance consultants regularly attended cabinet, counselor, or departmental meetings within their respective schools and interpreted project plans and goals to fellow staff members. A newsletter was produced in each school and regularly distributed to all faculty. A library of materials for teacher and student use was also set up by the consultant (Leonard, G., 1968).

The project directors have written a job handbook for students entitled *How to Face Future Success*. It was developed by 19 counselors who visited Detroit industries. The handbook describes 175 jobs and provides local job information. It focuses on groups of occupations (with a different page color for each group) and is written in a breezy style to appeal to high school students. Each job is rated according to the degree of required ability. The one-page descriptions include job requirements, educational experience, high school subjects required or helpful, methods of entrance, opportunities for advancement, employment outlook, pay, and additional sources of information (Leonard, G., 1966). The handbook also includes information and suggestions for self-examination. Among recent additions has been a summer work experience for 25 counselors managed by 25 cooperating Detroit Plans for Progress agencies and a vocational guidance institute for counselors and administrators sponsored by Plans for Progress and Wayne State University (Leonard and Vriend, 1968).

As the project developed, new job descriptions were written for the guidance consultants, the student aides, and the adult community aides who served as "bridge people" in organizing parent groups, accompanying field trips, assisting with occupational surveys, and offering clerical help. Information training sessions were held for the training of the adult women selected as aides. Regular monthly Saturday meetings were also held with school faculties.

A fairly detailed curriculum in career guidance has been developed by two of the elementary school guidance consultants and incorporated into a *Career Guidance Manual for Teachers* (Jeffries & Spedding, 1968). Lesson plans for grades one-six are geared toward the regular curriculum content of the elementary school. Suggestions are made for activities that will help to further the progress of every child. Included are hints for the teacher, suggested written and oral activities, field trips, and evaluative activities.

Evaluation has been built into the project in several ways, including the Career Guidance Surveys and Faculty Attitude Surveys. The Career Guidance Surveys seek to discover such things as leisure activities, occupational knowledge and thought, occupational plans, values, and attitudes toward counselors. Evaluations thus far have produced positive results. According to one evaluator, "All evidence at the moment attests to the worthwhileness of the project idea and its implementation [Leonard, G., 1968, p. 115]." In an official evaluative report done by an outsider who interviewed many of those involved with the project, the project is praised for its clearness of purpose, directness of approach, and the enthusiasm of its staff. The report notes the lack of evidence on the effectiveness of the subprofessional, the impact of the consultant on the regular counseling staff, and the extent of parent involvement.

While the Detroit project is aimed at inner-city minority youth and is reaching 15,000 students in 10 inner-city schools, it embodies many practices which could well be used with youth in general. It encompasses many aspects of career development concepts and tries to implement career development for students in grades 1–12 through a variety of activities, staff communications and involvement, parent involvement, use of subprofessionals, pre- and in-service workshops, and close articulation with business and industry.

The Occupations Curriculum — Cleveland

The Occupations Curriculum project evolved from two workshops on Employment Problems for Negro High School Graduates at Western Reserve University during the summers of 1965–1967. Under the direction of Anne S. Pruitt, the workshops were funded by grants from the Plans for Progress Council of Cleveland, the Cleveland Board of Education, and the Greater Cleveland Associated Foundation.

The purpose of each workshop was "to enhance the educator's understanding of the Negro youngster, his family and the world of work with its many ramifications, and to translate this understanding into meaningful action in the schools [Pruitt, 1967, p. 1]."

Each workshop included: 1) general sessions and small group discussions with authorities from business and industry, labor, education, government, and the behavioral sciences; 2) visits to business and industry in the Greater Cleveland area; 3) discussions with consultants from guidance, administration, and curriculum concerning implementation of ideas; and 4) planning by teams for implementation in their own schools of ideas developed in the workshop.

The Occupations Curriculum was developed by teams of three representatives from Greater Cleveland public and parochial junior and senior high schools with predominantly Negro student bodies. A team consisted of an administrator, a school counselor, and a teacher from each school.

Each team was exposed to presentations on such topics as "Occupational Trends and Youth Employment," "The Civil Rights Act — Title VII," "Industry's Expectations," "Apprenticeship Training," "The Negro Pupil," "Vocational Behavior Theory and the Organized Occupational Curriculum," "Compensatory Practices," and "Group Dynamics." Seventeen schools and 30 host companies participated in the workshop.

Following preparatory activities, and using Baer and Roeber's *Occupational Information* (1964) as a reference, each team was instructed to prepare a team report (an "Occupations Curriculum") for its own school. The curriculum was to consist of: 1) career development concepts, 2) concepts about work and industrial roles, and 3) career development skills. Each set of concepts and skills was to be accompanied by a set of pupil experiences that would teach the concept. Since the recommendations were to be made for a particular school, attention was given to mechanisms needed within the school to facilitate the curriculum, such as physical plant, materials, personnel, training, attitudes, and curricular and co-curricular innovations (Pruitt, 1967).

The most unusual characteristic of the plan is the selection of teaching-guidance-administrative teams to both develop and implement an "Occupations Curriculum" for a particular school. The teams studied career development and occupational trends, examined closely their own population and community, and tried to develop a series of experiences to implement theory. One curriculum developed for Charles Eliot Junior High School suggested specific activities to teach career development concepts and skills as part of the regular program in English, social studies, mathematics or home economics. The team suggests that such pragmatic knowledge as sources of information about jobs, available opportunities for vocational education, ways of securing jobs, and steps to take after losing a job should not be left to counselors alone.

> Since every student will need this knowledge if he is to succeed in life, we, as teachers, must incorporate these concepts into our lessons, regardless of the subject we teach. We do not believe that the teaching of these concepts should be regarded as something separate from the regular curriculum; rather it should become a part of the overall program, be it English, social studies, mathematics, or home economics. Of course, the teacher's cooperation and imagination will be the most important factor involved [Franklin, Murphy, & Donner, 1967, p. 5].

The team reports that for several years the English Department has conducted team teaching of careers on the eighth and ninth grade levels, inviting speakers from industry, the professions, and the military services, and using career investigations and term papers as culminating activities. Among the curricular innovations suggested by the team are a course in vocational economics and a new course in speech and drama. Tutorial services are already being provided by the National Junior Honor Society; lectures, field trips, and films are presented by the Science Club, and Visual Aids and Radio Room groups. The team's recommendations included hobby clubs in the areas of industrial arts, home economics, and art. A Career Week (B-B-C Week) * is being planned to serve as an introductory activity for a year-long Occupations Curriculum.

Career Guidance Program — University High School,* Minneapolis

Although progress in developing and implementing a sequential program of career guidance has been slow, the author has been involved in such implementation on a number of levels: from working with staff to try to effect changes in attitude toward vocational guidance, to attempting to identify some of the appropriate vocational development tasks and sequential experiences which might comprise a career guidance curriculum. A few ways in which career development principles are gradually finding their way into the University High School curriculum are described below.

---

*Butcher-Baker-Candlestick Maker

*During this writing the school merged with Marshall High School, and the new institution is Marshall-University High School.

While trying to develop a sequential curriculum for grades seven through twelve, the counselors began with the ninth- and eleventh-grade levels. This was done partly because some time was already available in the curriculum and, more important, because these are two important "choice points" for students in their educational careers. One of the first steps was to revise the student handbook, integrating it with the registration booklet in a manner to suggest to students that they are now in their "career" and that their position of "student" is part of that career. Some of the ideas of career as process, psychological, continuous, and changing have been built into the handbook. Also included is information about local industries and employment possibilities as well as education and training institutions most attended by University High School graduates. The booklet has been named *Career Planning Handbook*, a deliberate choice of title to suggest the ongoing nature of the process.

Another effort has been directed at trying to set up periodic (weekly or bi-monthly) career conferences throughout the year for students in grades 9–12, identifying three or four a year which each student could attend. With such an extended, continuous program, the importance of planning is reinforced throughout the year. By graduation time, students will have had an exposure to 12 or 15 fields of work rather than the typical one or two a senior Career Day allows.

With the additional impetus provided by National Vocational Guidance Week, counselors have been working more closely with teachers in an effort to encourage them to think and talk with students about the vocational implications of their subjects. Success in this area has been limited. There are still too many teachers who think that vocational guidance is something that goes on "down there" in the counselors' office, or that it really is not needed at all. However, there have been some successes. A creative art teacher devoted a unit to the theme of "Man in a World at Work" and had students depict man (or themselves) at work using whatever art media they desired. Some of the mobiles, collages, sculptures, and painting which resulted provide clear evidence that with an enthusiastic and imaginative teacher, the possibilities of relating subject to careers are limitless.

One of the ways in which counselors are trying to implement career development theory and work more closely with teachers is through team teaching a four-week ninth-grade careers unit. Because of their background in vocational guidance, occupational psychology, career development, and occupational information, the counselors took primary responsibility for planning the unit, rather than turning it over to the social studies teacher, who felt ill-prepared to teach such a unit. The Life Career Game developed at Johns Hopkins University served as the initial activity because it seemed to get at several of the desired outcomes of the unit. Students made simulated decisions for a student profile in the areas of occupation, education, family, and leisure. In the process, they learned something about the labor market, occupational structure, the interrelatedness of decisions, the importance of planning one's time, and the many sources of information available.

Other techniques used in the unit — some of them innovative, some traditional — were the video taping of panels in which juniors, seniors, and alumni discussed their own career development in prospect and retrospect; a highly structured student "Day in Industry," spent in industries in which students' parents were employed; a demonstration role-played counseling interview to prepare students for their own program-planning interview; and use of the *Career Planning Handbook* and selected sections of Katz's *You: Today and Tomorrow.*

Among the more rewarding aspects of the unit were the planning sessions with the social studies department, in which ideas and suggestions were shared and decisions were made regarding who could best handle each part of the unit. Genuine attempts were made to try to deploy teacher and counselor talents and skills in the most effective ways. The unit culminated in the actual program planning interview with the counselor, thus combining the group guidance activities of the classroom with individual counseling.

One of the most innovative aspects of the unit, and part of the overall career guidance program, was a computer-assisted counseling project. The computer programs were developed to help students in their educational-vocational planning and to transfer some information functions to the computer.

Several aspects of the unit were evaluated through 1) a questionnaire on the Life Career Game; 2) a comparison of students using computer programs versus those using the *Career Planning Handbook*; 3) adaptation of Crites' Vocational Development Inventory; 4) tests on education, occupations, and sources of information; and 5) a written report on "Day in Industry" and "Personal Profile" like that of the Life Career Game. Although the success of the unit and of various activities within it varied from class to class, the thrust of the unit was one which incorporated career development concepts, focused on the preparation for decision-making rather than upon choice, and utilized a number of innovative approaches to help students examine both self and society in beginning their exploration of career. The next unit to be developed more fully will be at the eleventh-grade level.

Developmental Career Information Program — Olson Junior High School, Minneapolis

An "Occupations Curriculum" for grades 7–9 has been developed by Rachel Leonard, a counselor at Olson Junior High School in Minneapolis. In addition to the usual vocational guidance units, individual counseling, and test interpretation, the counselors have begun a program to stimulate "planfulness" and to broaden student thinking about occupations in the community. In the seventh grade, students assume much of the responsibility for planning industrial visits and inviting resource speakers from the community. The emphasis is on the psycho-social aspects of a job. In the eighth grade, the focus is on learning about job families, primarily through speakers from community service organizations selected through classroom committees. The ninth-grade activities are largely planned through a Leadership Club, which arranges for speakers on the armed forces, colleges, and vocational schools. Periodic vocational seminars are also held on a variety of careers. Among the activities generated by the project is a newspaper published by the eighth graders (entitled *Vocational News*) in which they report on their industrial visits. The Life Career Game developed at Johns Hopkins University also has been added to ninth-grade activities.

The Olson Program brings together counselors, parents, teachers, administrators, business, and industry. It attempts to implement, over a three-year period, some of the developmental concepts of career, focuses on the broad picture of jobs and job families, and encourages broadening rather than narrowing perceptions. Feedback on the program is sought through questionnaire surveys of the student body. A video tape has also been created with 10 scenes depicting the development of the Vocational Information Project at Olson Junior High (Leonard, R., 1967).

Occupational Information Materials Project — Atlanta, Georgia

A five-year developmental project for the sequential dissemination of occupational information is underway in the Atlanta schools. Under the leadership of Helen Cook, an innovative program to formulate models for preparing occupational information for pupils in grades three through eight has been initiated. During the first year, materials were prepared in nine skills; in the second phase, these materials will be utilized over a three-year period. Continuous evaluation is built into the program in a variety of ways (Cook, 1967).

The general design incorporates four main activities:

1) securing pupil responses about a variety of occupations,
2) preparing materials based on the response,
3) utilizing the materials prepared, and
4) formulating models which may be used for the development of other materials.

The project is developmental in several ways: in the creation of materials for elementary-school pupils, in the meaningful acquisition of the information by the pupils during the last three years, and in the formulation of conceptual models (Cook, 1969).

The problem involves 1) the dissemination of occupational information and 2) the formulation of models. The project attempts to develop materials suitable for different socioeconomic needs. The plan is to begin presentation of occupational information in the third grade and continue through the twelfth grade. The information is intended to promote personal enrichment and motivation. The model will identify significant principles to be transmitted according to grade, cognitive levels, and socioeconomic levels.

The project was developed because of the lack of a planned program to disseminate occupational information in the elementary grades and the belief that a systematic program could assist in the development of improved self-concepts, the retention of potential dropouts, the revision of unrealistic choices, and the development of a sense of planning. It is not intended to force choice of occupations but to prevent rejection of suitable occupations and to promote more receptive attitudes toward high school planning.

The primary media to be used in the project are discs, television, and print. A television series on a variety of occupations has been developed with a program guide entitled "Countdown to the 70's" distributed to teachers. The "two-party monologue" is one of the chief media to be employed. Pupils will respond to two- or three-minute tape-recorded occupational briefs which will determine their familiarity with particular job clusters, personal contact with adult models, knowledge about the levels of employment opportunities, awareness of social and economic benefits, and educational requirements for employment. These materials will provide a source for understanding a pupil's concepts of particular occupational information and for determining how to extend his sensitivity to such information (Cook, 1968).

Members of the school system's Learning Resources Center will be responsible for preparing briefs, conducting interviews with pupils, and analyzing, summarizing, and interpreting responses. Much of the material prepared will be sequential in nature. All schools have access to the telecasts of the

Atlanta system, "That's My Business." Information prepared for discs and print will be determined through use of the Science Research Associates *What I Like To Do* (1954) and the *Gordon Occupational Check List*, published by Harcourt, Brace and World, Inc. (1963).

In formulating conceptual models, the project will also utilize the models Dr. Ann Martin has developed in the Pittsburgh Project (see chapter 4). Attempts will be made to administer the program as a part of the existing administrative structure.

The following questions illustrate the kind of information considered essential to the creation of sequential occupational materials:

1) What factors determine the level at which specific information should be available concerning related occupations?
2) How can fantasy choices be used to relate pupils' occupational information?
3) At what grade level should such characteristics as courteousness, punctuality, and reliability be introduced?
4) Should high prestige jobs be treated differently from low prestige jobs?
5) To what extent can material be integrated into regular class work?
6) Which medium disseminates the information most effectively?
7) How much background material can be communicated through the use of "occupational clusters"?
8) To what extent are pupils interested in obtaining occupational information at various age levels?
9) What types of pupils are most resistant to being involved with the information?
10) How rapidly must the material be revised? (Cook, 1969).

Progress reports from the first year of operation indicate that plans are proceeding with the first phase. NVGA's guidelines are being used for evaluating materials in the libraries of the nine developmental schools. Films available for the elementary grades are being reviewed, although there is a paucity of audiovisual material geared to this level. Commercial and government agencies and counselors have been contacted to identify materials believed to be effective for use at the elementary level. Computer equipment is being examined to determine possible future uses in the program. Sixteen hundred students have been interviewed on what they like to do, what they do not like to do, jobs they have seen performed, and their acquaintance with people who perform specific jobs. The SRA Inventory has been distributed randomly to related classes. An advisory committee has been established, and several local organizations such as the Atlanta Bar Association and the Rotary Club have been involved in planning programs. Telecasts are being utilized, and materials are being written and adapted for use in the classrooms (Cook, 1969).

Because of the strong interest in health occupations, materials on this area have been developed to supplement the television presentations and have been distributed to teachers (Letson, 1967). A program entitled "The Law in Your Life" is being prepared in conjunction with the Atlanta Bar Association. The survey of printed materials, *A Selected Bibliography of Occupational Literature*, is now available and includes 178 titles of publications together with grade levels and ratings according to NVGA standards. The staff has been consulting with others involved in similar or related projects.

The Atlanta Project, like the Detroit one, incorporates a number of features seemingly consistent with career development principles and geared to practice. It is developmental, it is creating new media, and it is formulating models and trying them out with the possibility that they may be transportable to other schools in the system. It is utilizing the resources of others, and yet focuses on materials development for the elementary level.

Project BEACON — Rochester, New York

While not strictly a career development project, Project BEACON of the City School District of Rochester, New York, is a developmental guidance-oriented program accomplished almost exclusively through the elementary school classroom (Stiller, 1968).

Project BEACON consists of seven emphases:

1) Building the Child's Self-Image,
2) Early Success in Language Arts,
3) Accent on Working with Parents,
4) Cultural Enrichment,
5) Orientation-Inservice Training of Teachers,
6) Negro History and Culture, and
7) Development of New Materials.

Like the Detroit Developmental Guidance Project, this one focuses on building a program to meet the needs of pupils of low socioeconomic backgrounds. One of the specific goals is to improve and raise educational levels. Created in 1964, the project has been developed in four target schools representing all social groups, with two schools with large nonwhite populations. The program began in kindergarten and grade one, with the next grade level added each year. There are 2,700 pupils in kindergarten through grade three in the four schools.

Each teacher incorporates into her classroom a variety of activities under each of the BEACON goal areas. A resource teacher has been assigned to each school, along with special service personnel.

The main emphasis of Project BEACON has been building each child's self-image through a variety of ego-reinforcing activities. Each child's work is displayed not only with his name, but also with a personal photograph. A "Who Am I" personal data chart is used each week. Autobiographies are prepared, illustrated with the child's own original drawings. Special speech and language development kits have been created, and dramatics and role playing techniques are used extensively. Link-up with a local "Roundabout" television series provides added educational stimuli, and portable tape recorders facilitate on-the-spot recordings of field trip experiences.

Parents are encouraged to participate in school activities in several ways. They are visiting consultants during class study of occupations, and several serve as volunteers. Regular faculty home visits are made on released time. One teacher created a novel method of school-home communication with an 8-mm film. The child planned his "movie plot" which began at home, continued to school, and through selected activities. After processing, the film was carried home and shown to family and friends.

Released time for in-service teachers has been an important part of the project. Multi-ethnic materials have been widely used, particularly materials on Negro history. The fundamental goal of Project BEACON has been the stimulation of academic achievement of children by providing the necessary conditions, methods, and materials to help build a better self-concept. In this sense it is integrally related to the goals of career guidance.

Career Development Program — Chicago

Under a planning grant from ESEA-Title III, a Career Development Program for Elementary-Intermediate Grade Children was piloted during the summer of 1967 in the Chicago Elementary Schools. Alice S. Gordon, Director, reports that the major purpose of the project was to develop, with teachers, counselors, and consultants, innovative group guidance techniques which integrate career development concepts into the regular fourth-, fifth-, and sixth-grade curriculum. Twenty-four teachers, twenty-four teacher aides, six counselors, eight consultants, two principals, and two clerks were assigned to two pilot schools (one advantaged and one disadvantaged) together with a supervisor and project director. The program was intended to bridge the gap between the primary level approaches to neighborhood and to community workers and the career programs of the seventh grade. It was also intended to develop, in teachers, an insight into the skills needed in guidance (Paulson & Gordon, 1967).

After a week-long staff orientation, the 431 pupils from 33 schools began the six-week program. The children participated three-and-one-half days per week, taking 45 field trips to varied Chicago industries. Teachers were given one hour each morning for preparation. The purpose of the field trips was to give the children opportunities to observe industries which employ a wide range of workers. Readiness activities, follow-up activities, and vocabulary development were incorporated into each visit. Parents accompanied the pupils on several of the trips. The main emphasis was on using the regular curriculum in social studies, math, science, art, and other subjects to implement guidance approaches to career development theory. During the last week of the evaluation, the school staff heard consultants, met with parents, and listened to authorities on guidance, mental health, industrial psychology, vocational guidance, and education. Teachers also took special organized tours.

In their classrooms, the teachers used guidance techniques demonstrated during their in-service training. They wrote logs, reports, and lesson plans for such units as "Changing World of Work and Workers," "Exploring Fields Related to School Subjects," "Mother's Role Today and Yesterday," and "Workers in the Midwest." They wrote anecdotal records and used "buzz" groups, role-playing, puppetry, sociometric scales, and open-ended sentences. Art projects, tape recordings of parent meetings and resource speakers, scrapbooks, songs, and poems, and assembly programs were among the highlights (Gordon, 1968). Materials are being assembled into curriculum guides. Parents and community were heavily involved in the project: parents through weekly meetings, classroom and assembly visits, and speakers; and industries through hosting field trips.

The project was extended into the home schools of participating teachers for the fall semester. Some of the same tools, staff, and materials will be utilized, focusing on the transportation and communications industries. An advisory committee, consisting of a cross section of the community, has also been selected. If the program is approved for another year, it will be expanded to other schools.

SAVIS — The Self-Administering Vocational Information System — Appalachia Educational Laboratory

An extensive student-activated vocational information system designed to meet the career guidance needs of students in Appalachia is being created by teams from the Appalachia Educational Laboratory. Although still in a conceptual rather than operational stage, the program is one which began taking shape in 1966 with an examination of: 1) the nature of the career development process, 2) the nature of youth in Appalachia, and 3) the nature of the environment in Appalachia (Andros, 1967b).

The program, as conceptualized thus far, is intended to be a voluntary, self-administered exploration program starting with kindergarten and moving on into junior-senior high and adult roles. The system will embody a "world of work component," a "self-concept component," counseling specialists, job placement programs, tryout and work experience programs, and a curriculum guide. It will employ multi-media, which are better suited to the needs of Appalachian youth who do not read well; it will also help alleviate the shortage of counselors by providing information in a variety of ways, such as mobile facilities, high speed computers (for occupational information, job market availability, vocational curriculum planning, and student course planning), films, programmed learning modules, tapes, filmstrips, and film loops.

One criterion of SAVIS is that the "self" component induces the individual to synthesize many factors (abilities, intelligence, interests, personality, and attitudes) into a clear personal identity (Andros, 1967a). The "world of work" component will offer the individual role models of people in various occupations, allowing the student to compare himself as a "total person" to people on the job. Other criteria important in the development of SAVIS are the following:

1) an occupational schema that makes sense to the user and allows carry-over,
2) presentation of information on institutional avenues to employment,
3) self-help approach through voluntary participation in an individualized learning situation,
4) voluntary participation in an individualized learning situation,
5) an interlocking system of units allowing for many different routes (and different degrees of readiness) according to readiness and interest, and
6) a multi-media approach.

A key aspect of SAVIS is the role model concept. For example, young workers on a highway project might be selected and shown in a group; then the focus would be shifted to one who would answer three general questions:

1) How did you move from the ninth grade to employment?
2) What is your working day like?
3) What is your off-the-job life like? (O'Reilly, 1967).

Because of the magnitude of the program, it has not yet become operational. Those involved in the project are now trying to ascertain ways in which it can best be operationalized.

Suggested Models for Junior High School Exploratory Programs — West Georgia College Conference

A model for career exploration in the junior high school was developed at a conference organized for that purpose at West Georgia College in Carrollton. A team developed a model of the "Full-Time Counselor Who Conducts and Coordinates an Exploratory Program in Grades 7–9." The idea that such a program requires a full-time coordinator is one which needs stating. Furthermore, the approach suggested in this model is one which involves teachers and counselors and is integrated into the curriculum in a kindergarten-12 program. The model suggests knowledge objectives and related behavioral outcomes for each of the three grade levels in the career development components of 1) self and relationships with others, 2) the world of work, 3) education and training, 4) economic education, 5) employability skills, and 6) decision-making skills (Winefordner, 1968). In the model, sample activities are listed to promote the achievement of each knowledge objective, and certain grade levels are recommended for special emphasis. The draft suggests that each local school adapt or modify the model to fit its own unique situation.

Another aspect of the program is the proposal of an orientation to the world of work using the Data-People-Things framework of the revised *Dictionary of Occupational Titles* (DOT). The model suggests using the Ohio Vocational Interest Inventory (OVIS), a recently-developed inventory designed to help students explore their vocational interests in relation to the DOT and in relation to 24 scales within which all jobs classifiable in the DOT can be grouped (Winefordner, 1968).

OVIS uses the Cubistic Model of Vocational Interests based on the premise that data, people, and things are essential elements of involvement in any job. The OVIS consists of a six-item Student Information Questionnaire and a 280-item Interest Inventory which usually takes 40 to 50 minutes to complete. It may be used to assist students in making high school and post-high school plans, to help potential dropouts identify occupations consistent with their abilities and interests, to assist counselors in planning occupations units, and to serve as a basis for building an occupational information library (D'Costa, Winefordner, Odgers, & Koons, 1968).

The model also suggests means of implementation, including soliciting administrative support, staff involvement, and open lines of communication. It is suggested that the collection or identification of materials and resources suitable for the program should be deliberate and not incidental and that resources be classified into informational, referral, and energy resources. The model also suggests that appropriate evaluation procedures be built into the program to determine, for example, if stated behavioral outcomes are demonstrated by overt student behavior, changes in teacher behavior, curricular examination, accumulation and use of relevant resource materials, reactions of community resource persons, and instruments which focus on student attitudes, knowledge, and behavior.

Developmental Vocational Guidance — Oklahoma State Department of Education

The Oklahoma State Department of Education has produced a comprehensive booklet for use in the public schools entitled *A Guide for Developmental Vocational Guidance Grades K–12*. Developed jointly by the Department of Vocational Technical Education, the Guidance and Counseling Division, the Curriculum Division, and the Oklahoma Curriculum Improvement Commission, the guide presents objectives, classroom activities, sample materials, and printed audiovisual references for levels K–3, 4–6, 7–9, and 10–12 (1968).

Experimental Career Development Project — Abington, Pennsylvania

Elmore Pogar (1967) reports an experimental project under an NDEA Title V grant calling for new approaches to career development for students in grades five, six, and seven. The activities are being developed around a central theme for each grade: grade five — interests; grade six — the concept of change; grade seven — values. Using the technique of simulation, the directors have designed decision-making activities stressing the effects of change and the role of interests. A series of speakers has been organized which shows how changes in the speakers' work have affected their lives. A "nonsense" game has been created to highlight the concept of interest development. Pogar reports that student and teacher response with "average" groups has been extremely positive thus far.

A Vertically Integrated Occupational Curriculum for Schools in Michigan

Initiated by the Vocational-Technical Education Curriculum Committee of the Michigan State Department of Education, this project is in the process of developing a model for a vertically integrated occupational curriculum from the elementary through the post-secondary educational levels. Such a curriculum is intended to develop positive attitudes about work, create an awareness of the vast occupational world, and provide adequate knowledge and skill to meet the demands of a constantly changing society. It suggests specific roles for each level of the educational system, with articulation between levels. Although not available as yet, the model is to have flexibility and adaptability to the individual needs of students. One unique feature is the provision of training for a "cluster" of occupations in late senior high school (Michigan, 1967).

Guidance Program Planning Project — Colorado

Sponsored by the Division of Guidance Services of the Colorado Department of Education (1967), this project will attempt to facilitate the implementation of outstanding guidance programs within Colorado. The project attempts to provide a sequential developmental model for guidance programs based on developmental tasks and stages. The long-range plans include group and individual guidance in educational, vocational, and personal-social areas. The description of this program sets forth a grade-by-grade sequence of the proposed educational, vocational, and personal-social curriculum units.

Group Guidance Activities, K-12 — Roslyn Public Schools

In an unpublished paper, DuBato presents "Suggestions for Group Guidance Activities on Self-Appraisal and Careers for Grades K through 12." The outline is a guide to be used as a starting point (as the author himself used it in the Roslyn Public Schools) from which further lesson plans can be developed. DuBato offers specific suggestions on how an integrated program of vocational guidance can be implemented. He then suggests specific activities which might serve as the focus for each developmental level, K–12 (DuBato).

PROGRAMS WITHIN COURSES

High School

Units in occupations probably have been the most common way in which career guidance has appeared in the curriculum, if career guidance has appeared at all. While such units may be effective, the trend is toward using them as part of the serial activities through which students develop vocational maturity.

A study done by Sanstead in 1966 reviewed 47 unit outlines in the United States and Canada and surveyed teachers of such units in small, medium, and large junior high schools. The questionnaire, sent to 40% of the junior high schools in Minnesota, produced a 91% return. The investigator attempted to ascertain both present practices and ideal practices as perceived by teachers of such units. Among his findings were the following:

1) Many of the teachers expressed a feeling of inadequacy and lack of preparation for teaching the unit. About 75% expressed an interest in

attending a summer workshop devoted to the teaching of an occupations unit.

2) Many wanted more help from state departments of education and from counselors. Only 13 of the state departments surveyed were able to provide unit outlines.
3) The larger the school the more time was spent on the unit and the more satisfaction was expressed with it.
4) There was a great discrepancy between the present practices and the "ideal" recommended by those teaching the unit. For example, only 15% had used field trips, but 87% recommended them for an ideal unit.
5) Most of the instructors seemed to have positive opinions regarding the study of occupational information units. They found it at least as interesting as other parts of the social studies course, and 43% found it to be more interesting. In larger schools, teachers reported a greater interest in the unit than in other parts of the course. About 95% felt that students need to study such a unit and could benefit from it.

Among the recommendations which grew out of the study were 1) a much greater concentration on occupational information for social studies teaching majors during undergraduate training and 2) closer working relationship and involvement of the counselor with the unit (Sanstead, 1966).

While this study does not provide definitive answers, it does point out some of the needs and concerns of a group of teachers in one state who have the responsibility for teaching the occupations unit. It also suggests some guidelines for the "ideal" unit. A few examples of units and courses in occupations being developed and/or taught in schools around the nation are cited below.

Introduction to Vocations — New Jersey. A pilot project for eighth- and ninth-grade terminal students, this program has been organized as an integral part of the statewide educational and guidance program. Started in 1965 by the Division of Vocational Education under a grant from the Vocational Education Act of 1963, the program initially was tried out in 14 schools, then expanded to 28 or more. It is designed to help students gain in occupational awareness and to give them a better foundation for later career and educational choices. The emphasis has been on short-term, manipulative, cycled exploratory experiences.

The cycling includes a flexible two- or three-week period of emphasis in the industrial arts, home economics, business education, and science. During this time, students are exposed to field trips, speakers, films, filmstrips, and occupational literature on a particular occupational field. Both individual and group guidance experiences are used. The counselor and/or coordinator works with teachers in developing experiences and materials.

Dr. Margaret Blair, director, reports that evaluations have shown that the experiences have opened many new doors, new goals, and new aspirations for pupils. Many students began to develop a sophistication in their questioning and were stimulated by the job visitation days, field trips, and speakers.

Of particular interest is the comprehensive "Teachers Guide for a Model Program in Introduction to Vocations," developed by the Division of Vocational Education (New Jersey, 1965). The course is described in considerable detail, including breakdown of units, time allotments, staff responsibilities, topical outlines, and suggestions for teachers. Basically it is divided into seven units, as follows:

1) Introduction to the Course;
2) Understanding Yourself — Individual Characteristics, Interests and Abilities as They Relate to Occupations;
3) The Economics of Industry;
4) Exploring Mechanical Occupations;
5) Exploring Occupations Related to the Field of Home Economics;
6) Exploring the Business World; and
7) Evaluating Your Experience and Planning Ahead.

Among the unique characteristics of this project are the cycling; the team approach using several teachers, and counselors, and coordinators; the examination of self, economics, and work; and the attempts to related subjects to careers. Another feature is the "Two-week Look at Business," in which students have a chance to try out jobs in Bell Telephone, Penn Mutual Life, Atlanta Refining, and Curtis Publishing. This, along with a number of field trips, involves community cooperation.

Introduction to Vocations Course — North Carolina. This one-year course has been taught as an elective to ninth-grade boys and girls in selected North Carolina schools since 1963. In 1966–67, there were 228 participating schools, with an enrollment of 16,052 students. The purpose of the course has been:

1) to help students in self-appraisal in relation to a variety of vocational opportunities;
2) to help students gain firsthand knowledge of the changing employment patterns and opportunities in North Carolina;
3) to help students understand the basic process of production, processing, and distribution in the American economy; and
4) to acquaint students with major occupational fields.

The overall objective is to help students develop planfulness. The six major areas of study are 1) relating one's characteristics to occupations; 2) exploring manual and mechanical occupations; 3) exploring professional, technical, and managerial occupations; 4) relating our economic system to occupations and to us; 5) exploring clerical, sales, and service occupations; and 6) evaluating and planning ahead. The course is currently being evaluated (North Carolina, 1967).

Invitation to Decision — Palo Alto, California. Some pioneer work on decision-making has been done in the Palo Alto Unified School District. The ninth-grade unit, developed by William Yabroff (1966) and associates under an NDEA grant as part of a larger research project, uses a decision-making framework identified by the authors as essential knowledge of 1) all possible alternatives, 2) possible outcomes of each alternative, 3) the probability of each outcome, and 4) the desirability of each outcome. The student booklet, *Invitation To Decision,* is a direct outgrowth of four studies of certain kinds of decision-making information: college prediction, college applications and acceptance, high school academic programs, and grade prediction. The study of guidance evaluation and program development in the Palo Alto schools is now in the third phase, to discover if and how certain data influence students' decisions (Clarke & Gelatt, 1963). Because of the high proportion of college-bound students in Palo Alto (9 out of 10), a great deal of emphasis has been placed on college choice and planning.

The key information reported to students in the Palo Alto project is in the form of experience tables. That is, the handbook summarizes "for you — the choice-maker" the first-year experiences of graduates of Palo Alto schools. The students are told that the booklet was written to help them learn *how to choose* and are given some specific steps for choosing wisely. They are told how to compute grade-point average, to figure their average, and to compare it with grades earned by present ninth graders and former students.

Considerable information about colleges and universities is incorporated into the booklet. These institutions are classified into four types (highest entrance requirements, high entrance requirements, medium entrance requirements, and junior colleges). A few technical schools and employment possibilities are also included.

Students are taught to use and study the experience tables and to make applications to their own plans and decisions. Information about "What Palo Alto Students Did after High School" (classes of 1963 and 1964 arranged by ninth-grade GPA) is summarized. Thus, students are able to observe, "This is what happened to students with grades like mine." They are asked to select some first-choice and second-choice colleges to investigate.

A part of the booklet is devoted to high school program planning, with careful explanation of high school graduation requirements and special unit requirements for different kinds of post-high school education (Yabroff, 1966).

A Task-Oriented Course in Decision-Making — Newton, Massachusetts. A unit on decision-making has been developed by Eugene H. Wilson (1967) as part of the "Information System for Vocational Decisions" at Harvard. A booklet called "You, the Decider" was written specifically for ninth graders at Bigelow Junior High School, Newton, Massachusetts. A six-week training session was held for teachers prior to the beginning of the unit. The three-way sharing of competencies has been beneficial among research personnel, teachers, and counselors.

The central idea of the unit is the concept of purpose, with the individual having a "sense of agency" and acting on his environment through the process of making decisions. Major aspects of the system consist of 1) a booklet containing relevant theory, 2) associated activities and tasks related to filling out the high school registration form, 3) a series of cases resulting in explicit criteria for choice, and 4) trained teachers with associated resources. Evaluation has been built into the system through 1) a student evaluation sheet, 2) the Gribbons' *Readiness for Vocational Planning* instrument, 3) *A Basis for Choice* instrument, 4) a semi-structured interview with two randomly selected students, and 5) teacher and counselor evaluation of certain dimensions.

The booklet includes some information on the theory of the decision-making process (decision points, exploration, evaluation, choice, clarification, and action); the relationship of "inside" information (abilities, interests, and values) and "outside" information (courses open, educational-occupational opportunities, other students' decisions) to decision; and interpretation and prediction (tests, norms, probabilities, risks).

A chronological plan was developed for teachers as they taught the unit four times weekly over four weeks in social studies class. A kit of occupational information was available in each homeroom for student use. These are part of the research materials of the ISVD which ultimately will be computerized.

Creative Intellectual Style in Gifted Adolescents — Michigan State University. Special concern about creative adolescents and their self-image led to a complex study of gifted adolescents and the ways in which they grow. Strongly influenced by Maslow's self-actualizing individuals, investigator Elizabeth Drews feels that "we rarely expose students to the range and possibilities of human excellence, give them a chance to meet the more creative adults, to stand on the shoulders of giants!" While the extensive research report cannot be dealt with here, the "Cosmic Approach to Counseling and Curriculum" warrants description. In a study of 400 gifted adolescents in the ninth grade, Drews (1965) identifies three "type-profiles": the studious, who were found to approximate the Protestant Ethic ideal; the social leaders, who were peer oriented, somewhat hedonistic, and materialistic; and the creative intellectuals, who placed high value on personal fulfillment and showed a distinct love of learning.

The basis for the program was an experimental, flexible textbook with an overview of the problems in the natural, aesthetic, technological, and human world, and a series of 10 documentary-biographical films. The films are supplemented by clippings, biographies, fiction, and current magazines. Each student was to develop his own open-end text, as a springboard to individual learning. The program was tried out in a social studies class in each of Lansing's four junior high schools. Throughout, the emphasis was on shaping one's life rather than feeling helpless, becoming more aware, expanding horizons, and then integrating the discoveries (Drews, 1964).

The five-month, one-hour-a-day program focused on "Being and Becoming," a plan by which students could examine their own styles of life and the important issues of today and tomorrow (Drews, 1965). It was suggested that through style-of-life films, including commentaries, they could take responsibility for their own education. The students constructed a textbook on "Four Worlds," which presented great themes as well as thoughts and commitments of world leaders. Films featured men and women with high standards of excellence and great social concern. They were models who demonstrated a satisfactory working philosophy of life and could communicate a variety of patterns of experiencing (Drews, 1965).

The film models were a lead-off point. They showed how one learns continually from all kinds of stimuli and how one responds creatively and selectively. The films are of people who have not succumbed to typical pressures against self-fulfillment. They are psychologically mature people who are self-aware and self-actualizing (Drews, 1965). Included are a Michigan historian, a woman judge, a professor of art, a woman physician specializing in radiology, a folk singer, a professor of anthropology, a female social scientist, and a philosopher. The final film reiterates ideas expressed in former films and discusses enjoyment, commitment, and involvement in life and work; the need for occasional privacy; the process of work and the product of one's efforts; rekindling the spark of creativity; and one's responsibility toward others and the rewards of contributing to the betterment of society.

This approach is unique in that it provides heroic models of self-actualization in a novel way — through life-style films — and gives students a chance to think about and discuss them. Drews believes that there is a great need in the schools to provide for the development of the creative and intellectual qualities of young people, that there is too much that is haphazard and accidental, managing and coping, but not planning and creating (Drews, 1966). It is suggested that creative youngsters need an exposure to different kinds of leaders, models and guides: to social philosophers; to scholars, scientists, and artists through all forms of media; and to counselor-consultants "to help students find appropriate methods of search, ideas to pursue, materials to work with and adults who can serve as models [Drews, 1966, p. 304]."

New Models in Career Guidance — Washington High School, Pittsburgh. A new program in career guidance at the Washington High School, already partly operational, is characterized by 1) a sequential four-year occupations class, 2) the use of paraprofessionals to assist in many clerical and other duties, 3) a more varied approach to counselor role, 4) computer-stored information, and 5) the use of community resources. The program is "life-preparatory" rather than college-preparatory; it uses the most modern audio-visual aids with an essentially work-bound population. The occupations course meets once a week, with classes shortened that day to provide time. The computer may be used to provide details concerning grades and courses taken, and to determine whether the students appear to be qualifying for college entrance.

Students are assigned to small, computer-selected groups based on information fed into the computer. Counselor-coordinators work with the groups on the selection of career objectives. Copies of the *Dictionary of Occupational Titles* and other materials are available to each group. Students meet with union representatives, carpenters, contractors, medical technicians, retail merchants, and civil service representatives. In Occupations IV, seniors have opportunities for work-study or work experience. The program is a systems approach to student information. It relegates routine tasks to machines, uses groups of peers for counseling, and engages community resources to participate in career guidance activities. It emphasizes the partnership approach between the schools and business, industry, government, labor, and the professions (Boynton, 1966).

Studies in Success — Grossmont, California. A plan to improve the vocational guidance of the average or noncollege preparatory high school student has been developed by the Grossmont Union High School, Grossmont, California (1965). The specific objectives of the initial summer program were:

1) students would learn about themselves at their own need and request;

2) they would learn about the world of work through a variety of experiences in and out of class;
3) they would begin the process of making suitable career plans;
4) they would learn about successful Americans; and
5) they would actively participate in the process of class management and decision-making.

What is essentially a team approach was used with 30 noncollege preparatory ninth-grade students (15 boys and 15 girls) with C or lower grade averages and middle distribution test performances. Three participant observers who had teaching, counseling, planning, observational, and recording functions were assigned to the students for two-hour-per-day class sessions and two-hour recording sessions for synthesis and evaluation. There were few home work and reading assignments, although students were encouraged to read selections in the classroom library.

The class was divided into three teams, each with a student secretary. Planning responsibilities for the class were shared by professional staff and students, each staff member becoming a consultant to one of the class teams. The vocational counselor's duties included orienting students to occupational tours, arranging for the tours, and taking small groups on short exploratory trips. He shared counseling duties for half of the group with the regular counselor.

A variety of reading, discussion, and inventory activities was planned to help students learn about the self. The chief method for learning about the world of work was field trips to 1) a public utility, 2) a merchandising firm, 3) government agencies, and 4) a private industry. One of the important facts the students learned was that many of the jobs they observed being performed did not require a four-year college education. Students were actually interviewed by personnel staff at one site and received feedback on their strong and weak points. They were encouraged to do further planning.

Following the development of the initial program, the project in modified form was field-tested in seven regular high schools. Studies of the world of work included Anne Roe's classifications, field trips, vocational counseling, and job interviews. Provision was made for the in-service training of teachers and counselors. The key to the success of the unit seemed to be the establishment of a good working relationship between the counselor and the teacher, and the counselor's ability to identify with the average student. The vocational counselor had special duties, with the classroom functions facilitating his counseling.

In general, each staff member involved felt that the "Studies in Success" unit should be continued, with some refinements and improvements. Many offered to work in their schools to assist in reaching all applied art students.

The criticisms included 1) not enough in-service training for counselors and teachers, 2) teachers being assigned the duty, 3) change of personnel among vocational counselors, 4) the multiplicity of forms and tests, and 5) random grouping of students resulting in unmotivated classes.

Many felt that a short vocational unit would be more successful than one spread through the year. All felt that the unit should be given to all ninth graders as part of a four-year sequential program of vocational guidance. The team approach was strongly endorsed. It was felt that the unit should not be graded, except for citizenship and effort. Personal counseling interviews seemed to be highly successful. It was decided to hold off total dissemination until schools and staff are prepared. Nonetheless, the project suggested some new approaches to grouping for educational-vocational planning, special techniques for working with average students, possibilities for teacher-counselor team teaching, implications for vocational units for curriculum revision, the need for adequate in-service training of counselors and teachers, and the model of a vocational counselor specialist working with teachers on vocational activities (Grossmont, 1965).

Career Planning Units — Minnesota State Department of Education. The Minnesota State Department of Education distributes two units to schools interested in occupations. Originally developed by the Hopkins and Roseville Public Schools, the units have been revised and reprinted under the titles "Career Planning, An Outline for the Ninth Grade Unit" (Roseville, 1966) and "Your Future: An Outline for the Ninth Grade Career Planning Unit" (Hopkins), (Barrett, 1966). The Roseville Unit, intended for all ninth grades, is organized into the following parts:

1) Knowing Yourself,
2) Taking Stock of Yourself,
3) Exploring Occupations,
4) Vocational Preparation,
5) Getting a Job, and
6) Youth and the Labor Market.

Included with the unit is a packet describing training programs in the 26 area vocational-technical schools. A fairly comprehensive appendix includes an autobiography, personal data sheet, test data sheet, a capsule picture of the Twin Cities labor market, and a career study outline.

The Hopkins Unit, revised in 1966, includes sections on self-evaluation, exposure to the world of work, relating yourself to the world of work, and educational planning. There is a useful description of trends in the labor force, as well as outlines for several aspects of vocational planning. Specific suggestions are made for audiovisual materials, and references are presented under each topic. Teachers can choose from a varied list of activities to achieve unit goals. Present plans call for a revision of the unit into a sequential syllabus of career guidance, which could be adapted at various developmental levels and at various places in the school curriculum.

Educational-Occupational Unit — Hawaii. An eleventh-grade educational-occupational unit distributed through the Hawaii State Department of Education follows a tenth-grade unit on self-understanding. In the junior year, the students are encouraged to concentrate on an occupational goal. All of the unit activities are directed toward this end. The unit is organized around the following topics:

1) Looking into the Future,
2) Reviewing and Analyzing Personal Qualifications,
3) Sources of Occupational Information,
4) Reviewing the Fields of Work,
5) Studying a Particular Occupation,
6) Opportunities for Further Education, and
7) Finding the Job.

The unit outline includes a wide variety of suggested activities, a speaker resource list, and references for students and teachers, The Hawaii schools have been considering new forms of organization and structure for the group guidance program (Hawaii, 1963).

In a secondary guidance handbook, guidelines have been spelled out for these major emphases: 1) appraising and understanding self, 2) vocational orientation and exploration, and 3) educational and vocational planning to help students develop skills in making choices. The handbook further suggests emphasis on *awareness* of the need to make educational and vocational choices, to accept responsibility for choosing and planning, to explore and obtain information, to encourage flexibility for change, and to practice making choices. While recommending flexibility in scheduling activities, the handbook spells out grade level guidance objectives for the eighth and ninth grades, including the following:

1) It is important to orient adolescents to the kinds and sequences of program choices they will need to make.
2) Students are helped to appraise their developmental level in terms of readiness to make choices.
3) The focus is on guided *exploration* involving a commitment to find out about oneself and about *broad fields* of work rather than preparation for a specific vocation.
4) Students may be expected to commit themselves to a level of expectation, but should not be required to make final educational and vocational choices which do not allow for changes.

5) There is a need for consideration of self-concepts, interests, personal goals and other factors, such as finances, attitudes, and values, in the choice-making process.

6) It should be remembered that the basic objective of guidance is the achievement of the best possible development toward self-realization and self-direction. Readiness to make a series of choices requires an effective program of both group guidance and individual counseling (Hawaii, 1966).

Occupational Trends Unit — Bay Shore High School, New York. A novel approach to occupational trends in American history class is described by William Fibkins, counselor at Bay Shore High School, New York. A one-week unit for students involved in a work-experience or vocational program utilized mainly phonograph records and discussion. Invited by the teacher to teach the occupational trends part of an "Economics and Labor Relations Unit," the counselor involved the students in the planning. He began the unit by playing a Bob Dylan recording which helped focus on the rapid pace of social and technological change and on implications for the students' own lives and families. "Officer Krupke" from *West Side Story* brought out concerns about the relationship of parental patterns, attitudes, and standards to their own values. The playing of Act I of *Death of a Salesman* and the character of Willy Loman stimulated discussion about the place and meaning of work in man's life and alternatives to work. Langston Hughes' poem "I, Too" highlighted some of the problems of work for Negroes and other minorities and helped the students think about their own attitudes toward minorities.

Other media included "How to Succeed in Business Without Really Trying" and "No Coffee," a satire on the lack of enjoyment and satisfaction on the job when the coffee break is cancelled. Fibkins (1969) points out that the records were used to generate communication about 1) the significance of man in the present world, 2) changing patterns of family life, 3) relationships between occupational supply and demand, 4) change from rural to urban population, 5) problems of minorities, and 6) factors affecting life style. He considers it important to use materials that students consider meaningful.

Development of a Curriculum and Materials for Teaching Basic Vocational Talents — John T. Dailey and Clinton A. Neyman, Jr., George Washington University. A project to develop and evaluate training materials to teach basic vocational talent skills to culturally deprived students was undertaken at George Washington University. The aim of the study was to determine whether marginally trainable youth could develop talent skills in the areas of abstract reasoning, mechanical comprehension, and spatial visualization and, thus, improve their employability in skilled jobs. The materials were piloted with a representative sample of 2,500 boys and girls in eight school systems around the country.

Three different types of materials were developed:

1) A series of paper and pencil aptitude exercises designed to teach nonverbal abstract reasoning, basic mechanics, and basic electricity.
2) A series of basic readers for culturally disadvantaged students in grades eight and nine, on such topics as "Transportation Today and Tomorrow," "The Automobile," and "Tools and Basic Machines."
3) Laboratory equipment and simple demonstration devices to teach those skills not suitable for teaching by other means. Evaluation was primarily through pre- and post-tests.

The study demonstrated that important vocational talents can be taught, to a significant degree, with relatively simple materials and procedures to eighth- and ninth-grade students who have a high probability of entering vocational training. It was demonstrated that the schools can compensate for the lack of environmental stimulation in technology and mechanics that limits vocational mobility today. The finding that culturally disadvantaged students can be upgraded in vocational aptitudes could mean that greater numbers could qualify for military, governmental, or industrial training programs where selection is based on aptitudes (Dailey & Neyman, 1967).

Elementary School

The World of Work: Increasing the Vocational Awareness of Fifth and Sixth Grade Pupils — New Jersey. Tom Gambino (1968) reports that "A Guidebook for Teachers" is being developed in the Division of Vocational Education of the New Jersey State Department of Education. Not yet in final form, the guide is being evaluated and revised. After a pilot tryout in selected schools, it will be available to all schools in the state. Its purpose is to help teachers help youngsters better understand the world of work by adding an "occupational dimension" to their teaching, particularly to the social studies curriculum. The emphasis is on vocational development, on broad-based exploration of people in their work roles. The intent is to provide practical suggestions for teaching vocational readiness in the upper elementary grades. The guide is organized around the following topics:

1) Introducing Vocational Awareness,
2) The Philosophic Basis for Developing Vocational Awareness in the Fifth and Sixth Grades,
3) Planning Your Program,
4) Teaching About Job Families,

5) Activities for Making Vocational Awareness Part of the Social Studies Experience,
6) Recommended Outlines for the Development of Vocational Awareness, and
7) Looking Ahead to High School.

Key characteristics of the program are that it is a two-year study, fully integrated with the total school program, social studies oriented, related to other subject fields, activity-centered, and personalized.

The guide seems to have drawn heavily on career development theory in its approach. "Looking Ahead to High School," for example, suggests the need for students to become aware of the next educational stage and includes descriptions of various high school programs available to them. The guide allows for a great deal of flexibility and creativity on the part of the teacher using it.

Vocational Guidance Units for the Elementary School — Iowa. As part of a course on "Career Development Theory in the Elementary School" at the University of Northern Iowa, Dr. Robert Frank (1967) asked his students to prepare teaching units for grades kindergarten to six. The units focus on the theme "The Awareness of Self through Vocational Development." The kindergarten unit puts emphasis on knowing self and environment and utilizes ditto transparencies to get across some of the concepts. Children learn about workers in school; they examine the jobs held by their mothers and fathers, the differences between grown-ups and children, and the differences between work and play. The first-grade unit is entitled "Workers — My Home and My School." The emphasis is upon knowing the immediate environment and upon work satisfaction. Fathers are seen as producers of goods and services.

Purpose of the second-grade unit is to help children become aware of the interrelatedness of community life, of the interdependence of workers, the division of labor, community helpers, and the workers who supply products and services. Units for grades three and four focus on the city: transportation, communication, and major industries within a metropolitan area. The goal is to help students develop vocational understandings of city life. The unit is planned for a medium-sized midwestern city and includes a visit to the airport to observe workers there. An extensive bibliography on transportation and manufacturing industries is included. The grade four unit tries to expand pupil awareness of the multitude and variety of occupations centered on fulfilling the basic needs of food, shelter, and clothing. It emphasizes change and job mobility and includes a field trip to a factory. Resource units for grades five and six are intended to provide a basic framework for the world of work in combination with social studies units on the United States, Canada, and South America. These units put more emphasis on integration of self and work and use Kuder Vocational categories for examination of interest. Work or workers in various parts of the above geographical areas are highlighted. The emphasis in the units for these upper elementary grades seems to be more on factual, statistical information than on the psycho-social aspects of work. Again, there is an extensive bibliography of resources.

"Room to Grow" Project — Philadelphia. "Room to Grow" is the title given to a series of 25 weekly guidance sessions about the world of work, the process of setting goals and making decisions, and the similarities between school and employment. Helen Faust (1967) reports that some Philadelphia public elementary schools are offering the programs to help economically and socially handicapped children compensate for possible inadequacy in background. Participating schools are largely in poverty areas. In most schools, the motivational program is offered in the fifth grade. In addition to informal discussion groups, there are visits from representatives of a variety of occupations who talk freely and informally about their work and the process by which they arrived at their present stage. Guests are carefully chosen, both for their knowledge of occupations and their ability to relate easily to children, thus providing a motivational force. Outcomes sought in the program are the strengthening of aspirations, understanding of decision-making, and introduction to the world of work as a world of people engaged in activities they enjoy. The program is sponsored by the Vocational Guidance Service of the Division of Pupil Personnel and Counseling, Philadelphia Public Schools. Further development and expansion of the program is expected, including the opening of a Career Center.

Project PACE. The Dayton, Ohio, PACE Project (Preparing, Aspiring, Career Exploration) outlined a plan for assembling, using, and testing occupational and vocational materials for the elementary grades. School counselors were assigned to two elementary schools

1) to establish two new elementary guidance programs around a vocational-occupational information theme;
2) to develop and assemble usable vocational-occupational materials;
3) to explore aspirational levels of children in grades two, four, and six, and to relate these to occupational potential; and
4) to explore methods of using occupational materials effectively in the elementary school (Peters, 1967).

A variety of activities and materials were tried and evaluated. Together, the counselor, teacher, and students compiled a vocational and occupational transparency book along with a scrapbook of ideas relating to interests, abilities, personality, and job qualification.

The project discovered that:

1) Teachers', parents', counselors' and students' responses indicated overwhelmingly that vocational-occupational information can be communicated effectively to elementary school children.
2) Some types of material were more effective than others, especially improvised approaches such as time studies, interviews, and job trees.
3) It was not clear-cut at what age or grade children best assimilate occupational materials, but the older students were able to name more jobs and were more precise in the identification of parental occupations.
4) Although it was not clear whether a group, individual, or combination approach was best, counselors gained the impression that what the counselor does within each class and the cooperation of the teacher are two major factors which make a difference in the progress of the children.
5) Teacher and parent response was generally positive and supportive, especially in the disadvantaged areas.

The project report presents considerable detail about activities of each grade level in each school and evaluative information regarding the materials and approaches used.

Special Projects

Career Information Center — Bronx, New York. Samuelson and Edelson (1966) report on the establishment of a central Career Information Center (CIC), established in the Herman Ridder Junior High School #98, Bronx, New York. The center is a depository for occupational information and career planning. Walls covered with pegboards display occupational pamphlets; important reference books are in special bookcases; and rotary file cards are used for sources containing additional information. Bulletin boards emphasize career demand fields. To publicize the center, a newsletter called *Goals* keeps students up to date on current materials and happenings.

Guidance teachers spend one period per week in the center during a group guidance class. A one-and-one-half minute tape (recorded by students) explaining the center runs continuously on the initial visit to the CIC. Students may use materials there, check them out, or write for their own free and inexpensive materials. The center is also a resource for adults in the pupil personnel services department.

The guidance department is now embarking on a long-range project of simplifying the materials. Lessons are being developed related to job analysis. Students from senior high schools and men and women from the world of work will be invited to speak to the student body.

College-Bound Club — Parma, Ohio. The establishment of a College-Bound Club was used as a means of encouraging an interest in further education at Schaaf Junior High School in Parma, Ohio. The community consists largely of second-generation Europeans, most of them factory employees with limited education. The club was developed in order to cope with the lethargy toward scholarship and the lack of interest among students in further education. The club program includes such topics as "how to read a college catalog," "how to visit a campus," and "college study." Representatives from different vocations for which college education is necessary are invited as speakers (Shelley, 1966).

Planning Your Future — San Diego, California. A program developed by the San Diego County Department of Education for use at the eighth-grade level is called *Planning for Your Future.* It was developed by a group of teachers, administrators, and counselors in the summer of 1964, and was field-tested and revised the following year. In three parts, the program covers: 1) "Self-appraisal," including attempts to have the student develop educational goals, vocational goals, interest and hobby goals, and other goals; 2) "Our Changing World," which uses 10 case studies to help students understand the past, present, and future trends and developments in work as a meaningful aspect of life and a problem-solving process; and 3) "The World of Work," which explores reasons for working, awareness of the wide expanse of present and future career opportunities with some emphasis on training requirements, and job successes and satisfaction (Pierson, 1966).

Predictive Data — Worcester, Massachusetts. Drawing heavily on H. B. Gelatt's "Information and Decision Theories Applied to College Planning" (1966), Thomas Christensen has prepared some materials for use with students of the Worcester schools. One booklet, entitled "What Happened to the Class of 1967, An Invitation to Making Decisions," presents experience tables and follow-up data for use with ninth and tenth graders. Since 23% of the graduates of 1967 entered full-time employment, Christensen (1968) devotes more space to this aspect of post-high school experience. He identifies industries and establishments employing Worcester graduates.

Another booklet of local data presents College Entrance Examination Board scores and rank in class of Worcester graduates attending certain colleges in Massachusetts. Like the *Manual of Freshman Class Profiles* prepared by the CEEB, the Worcester publication is intended as a guide in college decision-making.

Summary

These, then, are some of the illustrative developmental programs, units and courses, and special techniques or procedures being developed and/or used in career guidance in the schools. They represent efforts of a few school systems, large and small, in various parts of the country, to translate career development principles into practice, and to focus on meaningful vocational exploration through sequential approaches and experiences within courses.

Chapter III

COORDINATING SCHOOL-COMMUNITY RESOURCES

A clearly discernible trend in career guidance activities around the nation is that of greater school-community cooperation and involvement. Some of the projects have meant going outside the school walls, getting students, teachers, and counselors out into the community and, conversely, bringing the community into the schools through increased use of guest speakers, career conferences, joint research projects, in-service training projects, interagency communication, tours, workshops, institutes, and manuals. A few of these cooperative projects are described in this chapter. Some of those mentioned in the preceding chapter, while school-based, also involve community-centered extramural activities.

It should be noted that most of the projects described herein relate to the collation and dissemination of occupational information and seem primarily geared to disseminating information to the students themselves, as well as to their teachers and counselors. Katz (1963) has said that students do not know what information they need; they do not have the information they want; and they cannot use the information they have. Many of the projects described have been developed to allay that problem. Several of the reported workshops focus on in-service training of teachers and counselors to work with the employment-bound or culturally-deprived student. The first part of this chapter describes a few special projects for students — notably career days, conferences, and industrial tours and visits; the second part presents in-service programs for educators, most of them providing summer workshops, institutes, or employment through which teachers, counselors, and administrators can get direct exposure to business and industry.

PROGRAMS FOR STUDENTS

Career Conferences

One of the more common trends is toward the development of a series of career conferences scheduled throughout the school year, replacing the more traditional once-a-year Career Day. Although well-planned career days may be of value, the idea of continuous, periodic conferences through which students get a series of exposures to occupational information seems to be more congruent with current career development principles than a single experience. Some illustrative practices and guidelines are described below.

Career Guidance Conferences — Vancouver, Washington. The Vancouver program, reported by William F. Lothspeich (1967), Director of Secondary Instruction, had its inception in the summer of 1966, when a guidance committee was appointed to set up a comprehensive guidance program for Hudson's Bay High School. Because of the enthusiasm of both students and speakers, it was decided to expand the program to several schools in the area. A joint Career Planning Development Committee was formed for this purpose.

The initial program attempted to present as many occupational resource people and involve as many students as possible. The plan was projected on a three-year basis. Each year 60 to 70 resource persons representing a variety of industries and occupations are to make presentations. During his three years of high school, a student would be able to attend from 10–30 sessions. Ideally, he would select each month a vocational conference of some interest to him; however, he would be required to attend only four such conferences each year.

For the first project, resource speakers were contacted during the summer to allow maximum time for planning. After the student selected his preferences, the information was compiled and a simple color-card system was used for the student's release from class and admission to each session. During a guidance period the day before the conference, he was given a reminder about the session. The following day he was given his card. The Letterman's Club assisted in card collection and student movement. Members of the school's Service Club were appointed to meet the speaker and escort him to the assigned room, and members of speech classes were utilized to introduce speakers.

The career conferences were held once a month, October through April, with approximately 10 speakers for each session. Attendance ranged from 966 in November to 1,210 in March, or an average of 1,130 students each month. On the basis of a 1,350 enrollment, 83% of the student body was involved each time. The fields of greatest interest were teaching, psychology, architecture, modeling, aviation (men and women), fish and wildlife management, secretarial work, and business machines. Resource people responded very favorably to the program.

The April session was special, for it consisted of a number of representatives from local business and industry that would be able to hire a sizeable group of June graduates. The pressures of the holiday season forced cancellation of the December session. For the future, it is recommended that a clerk or aide be assigned to work with the committee to contact resource speakers, prepare visual aids, and type contact letters.

Evaluation was undertaken through a questionnaire. One valuable outcome was a follow-up meeting arranged for those students specifically interested in and qualified for a given field. The student could arrange, through the career guidance coordinator, for a visitation with a cooperating resource person to investigate a field in greater depth.

Careers of the Month Program — Texas. The "COMP" — Careers of the Month Program — in four Texas public schools (Levelland, Spearman, Petersburg, and Abilene) is an organizational procedure being developed to relate careers to curriculum. Each month one or more subject areas will be highlighted, possibly starting with "Business Careers of the Month" in September and concluding the year with "Fine Arts Careers of the Month." Related career areas such as math and science could be featured in combination, as could careers in physical education, health, and recreation.

Plans call for a one-month summer workshop of those involved to inventory information, to catalog career materials by curriculum offerings, to collect additional career materials, to write teachers' guides, to develop a community resource file, and to develop procedures for evaluation. The faculty will be oriented to the program during pre-school workshops. Students will receive orientation through an assembly program.

That's My Business — Atlanta, Georgia. To provide students with a variety of vocational information in a novel way, and with a local emphasis, counselors in the Atlanta Public Schools have initiated a system of mass-media informational services to supplement traditional approaches and individual counseling. A jointly-owned city-county broadcast facility, including a full-day radio schedule and a UHF television outlet, has facilitated the establishment of a series of weekly telecasts. These are intended to provide students with information about a variety of careers and occupational-educational programs, to identify these within the metropolitan area, to work with teachers and community leaders and resources to effect a "blend" of interests and concerns, and to develop the most meaningful way of presenting such information (Hopkins, 1968).

In the first year, 1964–65, a 30-program series was produced. Planning and follow-up reports from the career day programs of individual schools of preceding years gave some guidelines for emphasis. Primary student interest provided the core of the initial program, with a look at major employing businesses and industries in the area. Resources from community, civic, and fraternal groups were used.

The cast of *That's My Business* included students from the 22 high schools; the locale was the site of the business. Plots revolved around "show and tell," question-and-answer presentations.

The series was introduced by a discussion of labor trends and broad career opportunities predicted for the next decade. The next part showed counselors and students involved in actual counseling situations. Two programs on nursing and allied medical occupations were video-taped at a hospital. Another program was taped in a bank. For the 20% of the noncollege-bound girls who would be employed in the Southern Bell Telephone Company, the communications industry was explored. Three major television stations collaborated in developing a program on that industry. Other fields explored were city government, merchandising and selling, printing and related jobs, the steel industry, accounting, the bottling industry, and all phases of transportation-related jobs. The Bureau of Apprenticeship cooperated on a program in apprenticeship training. One month each year has been devoted to emphasis on continuing education, with views and discussions of six local colleges and universities.

Evaluative questions raised by the committee during summer planning time included the following:

> What was the actual involvement and participation in individual schools?
>
> What kinds of "lead-in" by teachers and counselors create the most favorable viewing climate?
>
> How can follow-up discussions yield more meaningful interpretation and lead to further individual exploration?
>
> What kinds of supplementary materials in different media contribute to more excitement and involvement in this approach?
>
> Is this facet of the total guidance program actually making a difference in students' motivation for planning and exploration?

One expected outcome was the increased interest of various business and industrial groups in sponsoring seminars for counselors and students to assist in exploration and clarification.

In the second year, schools increasingly utilized displays, the library, announcements, and printed materials to complement the weekly topic. Original programs were reviewed for updating or replacement; new programs were developed; a companion series for the elementary level was considered; more formal research was structured to assess differences. In general, the project has been supported and encouraged by industry, business, and professional personnel (Hopkins, 1968).

While this is neither the first nor the only project which utilizes career telecasts, it does incorporate a number of unique features. Similar programs were developed in 1958–59 under the direction of Catherine Beachley in the

Washington County, Maryland, schools. Closed-circuit weekly telecasts over a five-year period included orientation, personal problems, curriculum choices, college selection, occupational information, and military guidance. These, too, involved representatives of business and industry. Career telecasts used a variety of techniques, such as "This is Your Life," plays, revues, demonstrations, skits, actual job scenes, film clips, models, charts, and the like. There was careful pre-planning and follow-up (Beachley, 1958–59). Closed-circuit television for occupational information and career planning has been used in a number of schools around the country.

High School Orientation Program — Pacific Telephone and Telegraph Company. A program to help the school provide exploratory vocational experiences to better reach the disadvantaged was set up by Pacific Telephone and Telegraph and the public schools. The four-phase program for minorities included the following:

1) a counselor workshop for 27 counselors with speakers, departmental presentations, tours, and observations;
2) one-day teacher workshops for teachers of business-related subjects, focusing on areas of either business skills or craft jobs;
3) student workshops of 25 students, selected after consultations with counselors, with students visiting different departments on five consecutive Fridays and released from school the last two periods of the day;
4) company resources to be used as school people wish — the plant school, teaching aids, speakers, films, etc. (Robinson, 1966).

Chambers of Commerce Programs. Resources of the U.S. Chambers of Commerce have been utilized in a number of ways to get occupational information to students.

The Education Committee of the Greater Gardner, Massachusetts, Chamber of Commerce, for example, conducts a one-hour weekly career guidance program during the school year. One class period is set aside each week for interested students to meet local businessmen. Each week a representative of one vocation visits a school to discuss his field of work with students interested in it. Speakers often are former graduates of the school.

The Greater Grand Rapids, Michigan, Chamber of Commerce has sponsored a Vocational Information Institute annually in cooperation with the public high school. Sophomores, juniors, and seniors attend panels conducted by two adults employed in each of four or more fields (Chamber of Commerce, 1963).

A helpful guide for organizing conferences to provide students with local job information has been prepared by the education department of the national Chamber of Commerce. The guide, entitled "How to Plan Career Conferences for Teenagers," is a useful, practical tool for setting up such programs. The Chamber of Commerce offers a step-by-step guide for planning, including a sample letter to business and civic organizations asking for the names of qualified "vocational advisors"; a division of student, staff, and Chamber of Commerce planning responsibilities; a sample invitational letter to conference advisors; a sample thank-you letter; reminder cards; biographical outlines of speakers; recommended time allotments; a sample questionnaire; and final thank-you letters to all participants. Although the manual suggests the planning of a single conference, it could be used equally well for planning a series of such conferences, as suggested by the Vancouver schools.

In a project entitled "Hamilton Comes to School," each of the four junior high schools in Hamilton, Ohio, takes its turn inviting various civic, business, and professional people into the classroom to tell the story of their business, profession, or civic responsibility. With the cooperation of the Hamilton Chamber of Commerce, representatives are chosen from city government, public health, police and fire departments, hospitals, industry, the judiciary, and utilities. The visitors function as visiting faculty members. The nurses, firemen, and policemen wear their uniforms to give a more authentic impression (Ohio, 1967).

Career Weeks, Days, and Clubs

National Vocational Guidance Week. The attempt of the National Vocational Guidance Association to put the national spotlight on vocational guidance began in 1966, with the first National Vocational Guidance Week. Held in the fall, the week is intended to make the total school and community aware of the need for, and purpose of, vocational guidance. A variety of activities has been reported in the NVGA newsletter (October, 1967), and many more are suggested in the *Publicity Handbook* (1968) which has been developed for use by NVG Week program directors. The *Publicity Handbook* is available from the National Vocational Guidance Association, 1607 New Hampshire Avenue, N.W., Washington, D.C. 20009. With such varied activities as governors' proclamations, TV interviews, PTA programs, teacher discussion of vocational implications of subjects, art and speech activities, and assembly programs, NVGA hopes that schools will begin a series of career exploration experiences which continue throughout the year and from year to year.

"Planning the Career Day" — Kentucky State Department of Education. To help school personnel plan for a career day, a bulletin, "Planning the

Career Day," has been prepared by the Division of Guidance Services of the Kentucky State Department of Education (1962). Goals for "Career Day" are outlined and suggestions made for administering the day's activities. The bulletin recommends that, "since all high school subjects help in some way to train students for vocations, each teacher should consider himself to be an important part of the Career Day program." It is suggested that an all-school committee be formed with representatives from the administration, the counseling staff, the teaching staff, the student body, and the community sponsors. A guide for the "vocational specialists" is presented, as is a copy of the student questionnaire, list of careers, publicity suggestions, and evaluation and follow-up.

Everett Prep Clubs — Everett, Massachusetts. A project in cooperation with local schools, business firms, and Northeastern University is the "Everett Prep Clubs," designed to help youth make the transition from high school to the work world. The clubs are voluntary, after-school activities to supplement the regular guidance programs. Each club's activities are intended to help members select types of work suited to their interests, needs, and abilities. Each club also has a common pattern of activity, but is organized for a particular occupation such as teaching, graphic arts, and communication. Sponsoring firms provide competent adult leaders as speakers and as guides for the clubs (Chamber of Commerce, 1963).

Industrial Visits and Tours

Examples of a number of programs, including field trips and industrial visits, already have been described in chapter 2. Many of the attempts in this area seek to provide more direct occupational information to students, often working with the student of low motivation or aspiration (as in the Detroit Developmental Career Guidance Project) or with the employment-bound student. While many of the programs in progress seem to deal with these special populations, there is good reason to believe that such direct work exposures may be a stimulating part of a developmental program intended for all students. A few additional visitation programs are described in the following pages.

Coordinated Job Visitation Experiences. A pilot project for a career information program for St. Paul Como Park Junior High School ninth graders was undertaken in 1965–66, as a joint project between the school and the Chamber of Commerce. The objectives of the program, as outlined by Lyle Swanson (1966), were as follows:

To provide students with meaningful job visitation experiences which will result in more satisfying and realistic use of human resources, for both the individual and society:

1) to encourage critical appraisal of jobs through direct observation;
2) to provide students with a feeling of what a job is like through direct observation;
3) to expand the vocational horizon of students by providing a variety of work observation experiences;
4) to establish communication between students and workers;
5) to provide students with factual, accurate, and up-to-date information about jobs present and future;
6) to provide a setting where students may test their current career aspirations through direct observations;
7) to create an awareness among students of the rapidly-changing work world and the resultant implications of career planning[p. 2].

About 400 boys and girls participated in the project over a three-week period in January–February. Each freshman had three field trip experiences. as part of the core curriculum unit of personal and vocational exploration. Job settings were determined jointly by the student and the counseling staff.

Visits were from 8:45–11:45 a.m. and 12–3 p.m. on successive Thursdays, with 10–15 students in each group. Bus costs were underwritten by the Kiwanis Club. Field trips were planned as follows:

> Field Trip 1 — The first field trip was broad in scope, visiting an industrial site which is large and varied, and encompassing a wide spectrum of vocational opportunities. It showed the student the number of jobs available in a single industry and included office and secretarial work, management, production, etc. The selection of the particular industry to be visited was based on the student's major vocational interests.
>
> Field Trip 2 — This trip was planned by both teacher and student, and its purpose was to correlate the individual's interest with his ability, for a realistic career approach.
>
> Field Trip 3 — This field trip was that of the student's own choice and afforded him the opportunity to carefully examine the occupation in which he was interested. He could select the specific one he would most like to visit (Swanson, 1966).

Industries were presented guides to follow when discussing the job settings, and students were given the "SRA Study Guide for Occupations."

Another attempt to provide meaningful small-group tours of industry is reported by Yunker (1967). He was interested in providing vocational guidance to a group of low-motivated, male eighth-grade students who were identified as potential dropouts and noncollege-bound. His research study was built around tours of industry and business over a two-month period by groups of 8–10 students, followed by group guidance sessions in which the tours were discussed. Yunker attempted to ascertain if such procedures could significantly effect change in the students' academic grade point averages, citizenship grade point averages, vocational interest areas, and school attendance records. In general, the researcher found little significant difference between his experimental and control groups on the four criteria mentioned. A summer project of visits to seven industrial plants was also organized.

A special program for noncollege-bound students, in cooperation with industry, is found in the Brillion, Wisconsin, public schools. A survey of student needs, taken during the students' last semester in high school and after they had been working for six months, discovered that a wide gap existed between what was needed in the areas of mechanics, metal fabrication, and foundry operations and what was offered on the high school level. Many of the boys wished they had taken chemistry and more mathematics. The questions were raised: Why not have this type of motivation on the high school level through practical application of experiences in the mechanic and metal fabrication areas? Why not have stronger course offerings in the field of metals and power mechanics? A survey of industry revealed a desire for closer curriculum-industry cooperation and a positive willingness to help.

To meet these needs, after three months of constant study and consultation, an old industrial plant was leased, and procedures for the selection of students were set up. Students are given a number of tests in the ninth and tenth grades to determine appropriate shop courses. After they are enrolled, the program includes the following procedures:

11th Grade
- Kuder Vocational
- Individual Counseling
- Career Objective forms and personal guidance informational survey
- Field trips and involvement with persons from industry and business

12th Grade
- Individual Counseling
- Field Trips
- Appointment with employer for mock job interview
- Possibility for on-the-job training after school hours in related work

Placement into vocational schools, apprenticeships, jobs, armed forces, etc.

The approach is based on *seeing*, through seven different field trips; *hearing*, by talking with foremen and workers; and *learning*, by doing jobs similar to the ones they have seen on their visits (Drier, 1967).

Industry Hosts Students. The Pittsburgh, Pennsylvania, "Host a Student" Project, inaugurated in 1962, acquaints students with the Chamber of Commerce program of work and business activities. Participating schools send students on a rotating basis, with the Chamber hosts paying student expenses. The "Student Day in Industry" at University High School, Minneapolis, was another variation of this idea, with parents asked to offer their employment settings as sponsoring hosts for ninth grade[illegible]udying a careers unit.

An annual tour of business and industry for high school seniors is planned by the Genoa, Illinois, Chamber of Commerce. Firms are selected to illustrate different types and sizes of business. A few days before the tour, each student receives a 26-page brochure describing the host firms and a pamphlet entitled *How to Get and Hold the Right Job*. Students are then invited to lunch with the Chamber members (Chamber of Commerce, 1963).

"A Day at Work with a Kiwanian" is a program in Erie, Pennsylvania, which gives seniors a chance to spend a day at work throughout the city. The program was organized by the Erie Guidance Program and the Erie Kiwanis Club. One boy might work in an engineering department, another might understudy a machinist, and another might get a broad picture of occupations in a trucking firm. The program became so important that the Junior Chamber of Commerce initiated a similar program for sophomores (Odgers, 1967).

The "Boss for a Day" program developed in Miami, Florida, has grown from an honors program to a greatly expanded program geared to any student who may need career guidance and profit from it. Selection is partly based on primary occupational interests and partly on the need for information about both jobs and self. A get-acquainted dinner is held before the actual event. Employers introduce students to workers, explain the general operation, acquaint the student with specific departments and encourage him to ask questions. In some firms students are actually assigned work. The program has led to some curriculum changes and to a series of career conferences arranged by the school (Chamber of Commerce, 1963).

Identification with a Professional. Several school-community projects offer students an opportunity for close association with a person in the area of their vocational interest. Among these are the Special Interest Explorer Program, the Rotary Career Development Program, and the 3M Company Science Student Recognition Day.

The Special Interest Explorer Program, organized by the Boy Scouts of America in 1959, provides high school boys an opportunity to secure first-hand information (by experience) about possible professional areas through linkage with a successful person in the field. Special Interest Posts have been established in a number of fields, and schoolmen have testified to the program's effect on the attitudes and goals of the young men involved in it. The program actually originated in 1918 with the Sea Scout Program but has been expanded to a number of vocational areas.

The establishment of Explorer Posts provides a means by which sponsoring industrial and professional groups can interest young men in their fields, as well as provide youth with occupational information. The program is seen as an extension of, and a supplement to, the school's work in vocational guidance. A detailed list of steps to set up such posts in various communities, including an outline of "Do's and Don'ts," is provided in a special issue on the Explorer Movement available from Ross Taylor, Scout Executive, Orange Empire Council, Boy Scouts of America, 1032 W. 8th Street, Santa Ana, California. A mimeographed report entitled "Six Steps on How to Organize a Special Interest Post" has been prepared for anyone interested in developing a program. Key guidelines with division of responsibility and participant characteristics and functions are provided.

Rotary Clubs and other service organizations long have been involved in programs related to youth. A cooperative project between the Minneapolis Rotary Club and the Minneapolis Public Schools is the "Student Career Exploration Project." After a pilot program with three schools had been started, it was decided to extend the project to all of the high schools in the city. The basic format enables a high school junior to form a relationship with a person actually engaged in the occupation he is exploring. Counselors assist in identifying, in each school, three highly able and motivated students interested in exploring careers. Arrangements are then made for the selected students to meet the Rotarian, visit his place of work, and talk with him (and others) about the occupation and training required for it. It is hoped that this kind of involvement will supplement the other career guidance and vocational counseling activities in the school.

An annual 3M Company "Science Student Recognition Day" to honor talented high school seniors majoring in science and mathematics also has career exploration motives. Students and 3M researchers are paired according to the scientific interest of the student. Researchers discuss their work and act as counselors. Each student receives a *Science Career Guidance*

Handbook, prepared by the company, which includes the names of 3M professionals willing to assist in career guidance, scholarship and loan information, and supplementary information. Other companies, such as electric companies and banks, have provided similar opportunities for outstanding high school students with vocational interests related to their industries.

Cooperative Work Programs

One of the best ways for young people to explore themselves and the world of work is through direct work experience. Part-time employment assistance has been offered to students in a number of communities through the cooperation of business and industry. Part-time work and work-study programs are well known. The Junior Achievement Program, already mentioned, provides high school students an opportunity to gain practical pre-business experience by running their own small-scale businesses under the leadership of advisors from business and industry.

Exploratory Work Experience Program — Whittier, California. A work experience program which goes far beyond the usual high school work-study program is in operation in the Whittier Union High School District. Norman Eisen, Director of Educational Services, reports a formal and varied "Work Experience Education Program," which was created to meet the needs of a large number of students.

The purposes of the Whittier program have been described as:

1) to provide vocational guidance by allowing students to "sample" a variety of occupations,
2) to provide for the practical application of classroom training, and
3) to enrich the student's general education through supervised on-the-job experience.

The WEE program includes several elements, the most common of which is distributive education and diversified occupations. Like most programs of this nature, this is comprised of juniors and seniors enrolled in salesmanship, merchandising, or other vocational skill courses who are also in a paid, supervised work activity related to their classroom training.

The rest of the program is the most unusual. "Your Schools in Action" is a two-week work experience for juniors and seniors enrolled in salesmanship or merchandising. "Pre-Christmas Work Experience Education" is open to all students 16 years or older, who may engage in supervised work during the Christmas period, provided they complete the training course and meet the other requirements of Board Policy. "Released Time Work Experience" is for seniors, or juniors in special cases, who may try out a variety of occupations and professions as part of their vocational guidance, without pay and generally during nonschool hours. Students are assigned on the basis of their occupational or academic interest to observe and work with adults who are engaged in related activities (Eisen, 1966). In 1965–66, there were 2,051 trainee assignments to these varied programs.

In the EWEE program, which usually lasts about three weeks, emphasis is on helping students discover their interests and aptitudes in a variety of work situations. The entire community can become the classroom laboratory; training stations are established in hospitals, schools, clinics, laboratories, government offices, and the like. It is primarily students with better achievement and citizenship records who are assigned to this program.

A manual has been prepared for teachers, counselors, and administrators to facilitate implementation of the Whittier program. Benefits to students, employers, teachers, and the community are pointed out. Perhaps the most unusual aspect of this program is the variety and scope of the exploratory experiences available and the systematic means of evaluating the training experience.

Other Part-Time Employment Opportunities. Work opportunities are often publicized by the Chambers of Commerce. In San Diego, for example, cooperation with the Junior Employment Service helps students find jobs for after-school hours, vacations, and weekends. The mayor's establishing July as "Employ a Youth Month" helped 400-plus students locate jobs.

In Lynwood, California, a group of people from cultural and civic organizations have formed a Lynwood Youth Employment Agency Association to secure gainful employment for selected high school students who need part-time employment.

In St. Paul, the 3M Company has employed, in its laboratories in the summer, about 60 top college students from all over the country. The program is handled through the 3M Employment Department and the 3M Technical Forum. It was started to provide students with practical experience in industry prior to their making final career choices or completing their education.

A new "Vocational Opportunities Course" offered by St. Paul employers combines part-time work with field trips and presentations by local industrial leaders. The eight-week course, planned by a number of St. Paul companies, was designed to introduce underprivileged youth to opportunities in vocational education. Held in the summer of 1968, it was aimed at preventing the expansion of hard-core unemployables. Besides the work, visits, and on-the-scene talks, the course showed job opportunities available on graduation from the new St. Paul Area Vocational Technical Institute (St. Paul *Dispatch*, February 19, 1968).

In the last few years the number of part-time and summer work opportunities, especially for minorities and the disadvantaged, has mushroomed. Federal programs created under the Office of Economic Opportunity, such as the Neighborhood Youth Corps, Federal Job Corps, Work Opportunity Center, and New Careers, have given many disadvantaged youth a chance to move upward in the economic structure as well as gain exposure to and experience in new occupations. Efforts of private business through such programs as the Plans for Progress and the National Alliance of Businessmen have had similar goals. While not vocational guidance projects *per se*, many of them have helped deprived youth, especially, upgrade aspirations and develop themselves more fully. Although space does not allow detailed description of all these programs, several of them are alluded to throughout this monograph.

SPECIAL PROJECTS AND MATERIALS

Diversified School-Community Programs

A number of imaginative programs for both disadvantaged and other students, created by counselors, industrialists, businessmen, Kiwanians, Rotarians, Urban Leagues, a Catholic sister, and many other individuals and organizations, are in operation, a number of them in Ohio (Odgers, 1967). A few of these are cited below.

One program, entitled "Industrial Horizons," conducted by the Akron City Schools enabled 92 inner-city boys who were to enter eighth grade in September to spend six weeks at a vocational school or high school. The purpose of the program was to help the boys learn the value of school and vocational training and to better understand the work world. Each week they were introduced to a different area of vocational education. Four days were spent in shops and laboratories with one day devoted to a field trip to a local industry. The boys and their parents received counseling on job opportunities (O'Dell & Richards, 1968).

A special apprenticeship project has been established through the joint efforts of Goodyear Tire and Rubber Company, the Urban League, and the Akron City Schools. It is aimed at helping inner-city youth with a high school diploma or equivalency certificate pass the Goodyear industrial apprenticeship examination. Twenty young men are chosen to attend vocational classes seven hours a day, five days a week. They spend four hours per day in general and basic instruction and three hours in vocational instruction. After a 25-week training period, they take apprenticeship examinations and go to work for Goodyear (Lewis, 1967).

The Cleveland "Orange Junior-Senior High School Resource Project" was created to help identify occupational information resources in the community. The counselor, suspecting that there were a lot of untapped resources, contacted local Kiwanians with the result that the community was divided into sections with every section but one assigned to a committee of Kiwanians for a house-to-house canvas. The final section was assigned to the senior class, so that students might appreciate the work involved and the resources available. Survey questions included such items as colleges attended, language spoken, occupations, hobbies, and services available. Results were put on 3 x 5 cards and filed according to the above categories. The school has a file of resources in constant use.

The counselor reports that of the 1300 families surveyed, many are willing to talk with groups of students about occupations. Many more are available for individual interviews, and others are willing to talk to students interested in their institution (Odgers, 1967).

A "School-Community Slide-Film Project" has combined the interests and talents of community and school personnel in an occupational information project. To develop sixth graders' attitudes toward occupations, a pupil personnel director conceived the idea of preparing and using a series of 35 millimeter slides of people at work in a local glass company. The superintendent of schools, who enjoyed photography as a hobby, took several outside shots and narrative slides, while the company employed a commercial photographer to take the inside shots. The pupil personnel director prepared the narrative and an accompanying teachers' handbook. A set of about 80 slides was created, showing people at work at the company. The slides also contain considerable local and area geography, social studies material, and background for science.

Through a "School-Employment Service Cooperative Program" in several Ohio communities, a program has been set whereby no pupil can drop out of school without first going through a counseling interview at the local employment office. The program has three purposes: it gives potential dropouts a chance to see the difference between job orders on file requiring a high school diploma and those which do not; the employment service may be able to help the student find a more appropriate job than he might find himself; and, in some cases, the employment service has been able to find part-time employment for the student and thus enable him to remain in school.

In Akron, Ohio, a directory of lay guidance workers was developed entitled *People Who Know in the Akron Area.* This publication includes the names, business addresses, home addresses, and telephone numbers of over 300 area workers or employers who have volunteered personal time for any or all of the following:

A — willingness to talk to large group assemblies regarding careers or career fields;

S — willingness to talk and lead discussions with small groups such as classes or a career conference group;

I — willingness to counsel with individual students, usually at the volunteer's place of employment.

The Youngstown "Industrial Information Institute," financed by business and industry in the Youngstown area, has successfully conducted many projects on the development and dissemination of accurate occupational information and guidance materials. The institute's projects include: 1) a speakers' bureau of industrial business and industry leaders; 2) the development of supplementary readers with career, economic, and geographic information related to the area; 3) movies showing educational and vocational opportunities and industrial exposition; 4) a community job study; 5) a program of economic education for parents, teachers, and the public-at-large; and 6) the underwriting of a summer training program for counselors (Odgers, 1967).

Student Materials Furnished by Industry

It would be impossible to list all the materials that thousands of industries, businesses, and corporations have made available to students. Some of them are well known and have been widely disseminated, such as the New York Life Insurance Company "You Should Be" series. Materials are produced and distributed through professional societies and organizations, such as the American Society of Professional Engineers or the American Society of Medical Technologists. These professional groups often have displays of materials available at national and state conventions. Signing up for their mailing lists usually produces a plethora of brochures, pamphlets, and catalogs. Some of the larger companies have their own education departments, which specialize in projects to get information about their vocational and training opportunities to students. Large firms such as Ford Motor Company, for example, have produced films, set up special schools, and developed training programs which require school-community cooperation. General Electric has produced a number of booklets, such as "Why Work?" or "Why Study English?" which are available free on request. Such materials are published, the company suggests, "in the interest of developing competent, clear-thinking people to help meet the problems of tomorrow . . . not only in potential employees of industries like General Electric, but as citizens in a free society." The Electric Companies of Connecticut have published an annual career book for the past nine years. It is intended to acquaint students with career opportunities in Connecticut industry through single-page job descriptions. The book, written by prominent men and women in the field, has been widely distributed in the state. The objectives are 1) to assist the student in choosing a career and 2) to help youth of the state realize the scope of jobs available right in Connecticut (Chamber of Commerce, 1963). The names of selected industrial firms which produce and distribute vocational guidance information for students are listed in Baer and Roeber, (1964).

A number of communities have produced local job market information which is of use primarily to those in the local region. One example is the previously-mentioned handbook developed for Detroit high school students as part of the DCG Project, entitled *How to Face Future Success* (Leonard, G., 1966). It is a joint production of Wayne State University, the Detroit Public Schools, cooperating businesses and industries, and 19 counselors who investigated the jobs and reported their findings. Brief one-page descriptions of 175 jobs are given, including job description, methods of entrance, opportunities for advancement, employment outlook, and abilities and aptitudes required. The jobs are grouped according to clerical, managerial, professional, service, skilled, technical, and production. The information has been collated into a highly readable, illustrated booklet.

An example of what several communities have done through local Chambers of Commerce is found in the booklet *Target: Employment!* produced by the Chamber of Commerce of the United States. The booklet presents problems and solutions or follow-ups to problems connected with education, training, and employment. The examples are presented concisely, usually on one or two pages, together with data about where to write for further information. The activities include manpower surveys, vocational needs surveys, counselor days, and career guidance days. Samples of questionnaires, letters, and publicity blurbs are also included as is an annotated bibliography of materials available through the Chamber of Commerce of the United States (1964).

How to Plan Economic Understanding Projects is still another Chamber of Commerce publication. The handbook offers ideas and descriptions of a variety of activities related to career guidance, including such topics as inventories of local job opportunities, tours of business and industry, part-time employment, speakers, teaching units and aids, and other activities. Brief summaries of projects undertaken to promote economic understanding appear throughout the booklet. Activities mentioned are manpower and training needs survey, survey of vocational education, business-education days, and workshops and seminars.

A Vocational Resource Directory, published by the Paramus, New Jersey, public schools, contains the names of several hundred local business, trade, and professional people who have volunteered to counsel the young people of their community. About 150 jobs are briefly described in the directory, together with a list of "residents who are qualified by experience — and anxious by choice — to counsel Paramus youth of high school age and older exploring, selecting, and pursuing a vocation [SRA, 1966]." The directory is used by counselors, principals, recreation workers, and others involved in career planning with youth. It was prepared by the school's Office of Psychological Research, Guidance, and Special Education under the sponsorship of five civic organizations. Copies may be obtained for 10 cents from Benjamin Barbarosh, Parkway School, East Ridgewood Avenue, Paramus, New Jersey 07652.

B'nai B'rith Vocational Service (1968) has developed a number of occupational information resources for use by counselors, teachers, parents, and students. Of particular interest to counselors is a "Counselor's Check-Up List" which could serve as a guide for setting up, developing, and updating a career information library or resource center. Booklets on the Peace Corps and VISTA and a variety of occupations are available, as are such publications as *College Guide for Jewish Youth, You and Your Child's Career*, and *Youth — Who Am I? What Difference Does It Make?* B'nai B'rith also has been active in coordinated community efforts to develop career guidance resources for youth; out of these interests have come such publications as *A Career Conference for Your Community* and *A Vocational Resources Directory*, a guide to establishing a panel of adult career advisors.

Teaching Aids

The recently released film "Auto Mechanics and Technicians," produced by the Ford Motor Company (complete with teacher-counselor guide), is an excellent example of the kinds of materials produced by industry which can be used as teaching aids both in occupations units and in group guidance programs.

Movies, such as *The Akron Story* (Akron, Ohio), which describe the growth of industries within a community are also useful aids in career guidance. This movie, designed for fifth-grade use, has won several awards. Some Chambers of Commerce have sponsored the development of such teaching aids, as well as teaching units, and have become involved in writing text materials for the schools describing the history of local industry, its growth, products, and contributions. Others have been involved in community skills surveys which analyze long-range employment needs anticipated by major employers in a region.

Youngstown, Ohio, reports that its Chamber of Commerce Education Committee sponsors two annual telecasts for high school seniors: "Business Asks Youth" and "Youth Asks Business." The questions discussed include: Why do students drop out of school? What opportunities exist in the Youngstown area? What should be the primary concern of today's youth — opportunity or security?

Essay Contests

Essay contests have been sponsored by a number of organizations from the American Legion to the Association of Physicians and Surgeons. "The Role of Industry in the Development of America," sponsored by the Stanley Works of New Britain, Connecticut, is one example. The National Vocational Guidance Association has suggested essay contests as one of the activities of National Vocational Guidance Week.

Inter-Agency Cooperation

Greater inter-agency cooperation has been reported on a number of levels. One report on the relationships between secondary schools and the United States Employment Service has been sponsored by NVGA. An exploratory pilot project was set up in Minnesota. A questionnaire was sent to a sample of over 250 Minnesota high school counselors and 33 local offices of the Minnesota State Employment Service. There was a 90% return from the former and a 100% return from the latter. Initial tabulations have indicated wide variations in the satisfactions high school counselors feel in their relationships with the Employment Service. There were similar variances in the Employment Service counselors' reaction to the cooperation they have received from the schools. Both groups desire more effective communication with each other, particularly in the sharing of test data (National Vocational Guidance Association, 1967).

Another form of cooperation between the Employment Service, the Division of Guidance and Testing, and the schools in several states has been the development of a plan for the training of school counselors in the use of the General Aptitude Test Battery and for the orderly referral of job seekers to the local employment office (Odgers, 1967).

A program in conjunction with college and university officials and the State Employment Service staff was conducted in Arizona. Six regional manpower information and counseling clinics for school counselors and administrators were held. Manpower economists presented market needs and trends, followed by workshop groups seeking the best ways of improving and coordinating vocational counseling efforts of both school and employment counselors (Jerome, 1967).

An extensive inter-agency project intended to make occupational and educational information more accessible to youth and to provide more relevant local job market information is that between the New York State

Education Department and the State Employment Service. The project aims to improve communication between the two agencies in developing an occupational information dissemination unit (DuBato, 1967).

It should be emphasized that this list of projects and materials is not exhaustive. It does, however, suggest the widespread combined efforts of school and industry to provide occupational information and exploratory work experiences for young people.

PROGRAMS FOR TEACHERS AND COUNSELORS

Counselors and teachers usually obtain occupational information in a number of ways. The most common are through a course in occupational information in graduate programs, summer business and industry workshops, and a guidance practicum in business and industry, where a counselor spends a series of days at work with supervisory and personnel staff. Summer employment programs sponsored by companies such as Northwestern Bell Telephone offer another source of information. Industry-sponsored conferences or workshops combining instruction with plant visits and employer interviews are another source of information. Business-Industry-Education Days, in which business and industry serve as hosts to educators, provide still another approach. In addition, contact with local business and service groups such as Rotarians or Kiwanians through career conferences and student tours gives counselors and teachers indirect contact with the world of work.

Besides the numerous programs for students, industry has taken cognizance of the fact that many teachers and counselors feel inadequately prepared to deal with occupational information. Counselors, particularly, have been accused of having greater knowledge of college requirements and college information than job requirements and occupational information. This academic emphasis is sometimes attributed to the fact that the work world they know is that of education and that many have had little direct experience in industry. To compensate for this lack of exposure, a number of in-service programs have been developed by business and industry, by colleges and universities, and by state departments of education to help school personnel overcome the lack of preparation regarding the world of work. A few of these partnership programs are briefly described.

Counseling Employment-Bound Students — Oakland Guidance Project

An attempt to refine counseling procedures for employment-bound students in Oakland County, Michigan, is described in a report of the Oakland

Guidance Project of 1965 (Green). The purpose of the demonstration project was to evaluate the effectiveness of vocational guidance counseling practices and to develop and demonstrate the use of certain techniques designed to better meet the needs of employment-bound youth.

Counselors were surveyed regarding their background, needs, and opinions in working with employment-bound students. They confirmed that they thought employment-bound students most difficult to work with.

Urgent or strong needs rated by the counselors included:

1) information about local job opportunities for 17-, 18-, and 19-year-old youths;
2) information about local placement opportunities for on-the-job training, apprenticeships, etc.;
3) more complete and realistic information on entrance qualifications and selection practices for local job and training opportunities;
4) information concerning local need for employees with certain qualifications;
5) more placement opportunities in school subjects for students who cannot find appropriate classes to fill out the school day;
6) more *time* to counsel potentially employment-bound students;
7) a solution to the problem of where to place students who do not adapt to present school curriculum;
8) information about local labor market and trends.

Several activities were developed to meet those needs: a) a survey of entry occupation openings; b) a counselors' handbook of resources; c) employee characteristics obtained through follow-up study; and d) tours of business and industry (with emphasis on the qualifications and duties of young people in entry occupations). A questionnaire for use with eighth- and tenth-grade students was also prepared, entitled "Job Education Training Survey." Much information about basic characteristics of the employment-bound student population was collected and made available to counselors and administrators.

A list of questions was developed that could be asked of local employers, and the responses were compiled into a booklet. The Oakland Area Counselors Association also formed a committee to compile a handbook of information about vocational school directories, occupational information sources, referral sources, local employment opportunities, college information references, financial aids references, group guidance materials, and related guidance materials.

The Oakland Project demonstrated a program which examined both student and counselor needs and implemented procedures to meet them. Counselors gained more information about local employment opportunities and about the students with whom they had previously found it most difficult to work and employed a number of procedures for data collection and analysis which should help students in considering alternatives. Workshops for counselors from each community were set up as part of the project to assist in developing the implications of the information gathered. From the data, it was possible to identify eighth-grade, tenth-grade, and twelfth-grade students likely to be employment-bound. A series of area conferences and workshops to develop ways to implement the findings of the Oakland Project have been held. They have included a "Counseling and Technology Workshop," a conference on "Counseling Employment-Bound Youth," industrial visits, and discussions on the "Michigan Manpower Study" and "The Present and Projected Demand for Technically Trained People in Michigan." A list of "Selected References and Resources for Use by Counselors in Study, Research, and Counseling Employment-Bound Students" should be of great value to counselors and teachers in working with this particular population (Johnson, 1967).

North Carolina Workshop in "Career Planning and Development"

An advanced workshop for counselors was sponsored by the Guidance Services Section of the North Carolina State Department of Public Instruction, in cooperation with North Carolina State University at Raleigh, the University of North Carolina at Greensboro, and East Carolina College. Funded under the Vocational Education Act of 1963, the workshop was designed to give counselors further knowledge and understanding of career planning and development, particularly with employment-bound students. A program of instructional periods, field trips to industry, independent study, and informal discussions comprised the content. Both theoretical and practical experiences were included (Morehead & Fuller, 1965).

Each enrollee and each industry visited were given the following statement regarding field trips:

> Your field trip is to learn as much as possible about the workers rather than the manufacturing process; you want to see, hear, feel and smell the working conditions and environment; see actual jobs, what employees do; kinds and number of jobs, how a person benefits, promotions; how you as a counselor would help persons of various ages and abilities apply for the various levels of jobs in this industry (Morehead & Fuller, 1965).

The workshop included lecturers prominent in the psychological, sociological, and economic aspects of career development. A developmental program presented by Charles G. Morehead, one of the directors, provides practical suggestions for the elementary, junior high, and senior high school levels. A thoughtful review of issues and concepts in career planning was presented by Edward Roeber, a portion of which was devoted to federal legislation, with a concise summary of implications of such legislation for counselors. The report of the workshop proceedings could serve as a basic text for any teacher or counselor wanting to update his background and thinking regarding career development theory and practice. The workshop has been repeated each year since 1965.

Summer Career Guidance Workshop — San Diego

A summer career guidance workshop developed for counselors in conjunction with the San Diego Research Project, "Vocational Information in Education and Work" (VIEW), resulted in a manual on entry jobs prepared by the counselors. Entitled *Viewpoint — Entry Employment in San Diego*, the manual explores and analyzes the labor market in Southern California for entry jobs for high school graduates and terminal junior college students. The nine counselors had on-the-job experiences and recorded their impressions and perceptions on a profile sheet for one of the eight businesses included. San Diego industries covered included banking, utilities, merchandising, manufacturing, and municipal government. The project was cooperatively organized in the summer of 1965 by the County Department of Education, San Diego State College, and eight businesses and government agencies. The manual is intended for use by participating employers, counselors, and students (San Diego County, 1965).

Workshop on Employment Problems of Negro High School Graduates — Case Western Reserve University

Partially described in chapter 2, this project, directed by Anne S. Pruitt of Case Western Reserve University, was organized around teams of three from the Greater Cleveland schools with high proportions of black students. The summer workshop included teams of administrators, teachers, and school counselors who engaged in the following kind of activities: 1) general sessions and small group discussions with authorities from business and industry; 2) visits to parents and to Greater Cleveland business and industry; 3) discussion with consultants from guidance, administration, and curriculum; and 4) planning by teams for their own schools and follow-up implementation. As a culminating activity, each team wrote a plan of implementation or an "Occupations Curriculum" for its own school (see chapter 2). Those participants who desired employment for the remainder of the summer were placed in jobs in Greater Cleveland industries. The workshop was conducted under a grant from the Plans for Progress Council of Cleveland and the Cleveland Board of Education (Pruitt, 1967).

The Quad City Industrial Orientation Program for Counselors — Iowa

This project, in the summer of 1967, was intended to provide industrial and training type experiences for counselors in the Bettendorf-Davenport, Iowa, and East Moline-Rock Island, Illinois, areas.

Twenty counselors were chosen to work in 22 orientation settings on a salaried basis (from $125 to $153 per week). Programs ranged from one week to eleven weeks, with the average length of eight weeks. The program was to give a vocational exposure to the counselors which would aid them in working with students. Additional results of the contact were the creation of a vocational training program for counselors and the development of a catalog of industrial information about some 160 Quad-City businesses and industries. The catalog was assembled by the Quad-City Merit Employment Council (a strong supporter of the project) and distributed to all area high schools. The council is an affiliate of the Plans for Progress Council. A two-week, no-cost Industrial Counselors' Seminar was also sponsored by QCMEC. Thirty-two counselors participated and received two hours of college credit. A slide-tape presentation was produced, describing the many different phases of the program and showing counselors at work in various industries. A set is available at a nominal fee upon request. Additional information is available from Robert N. Illingworth, Director of Student Personnel, Scott Campus, Eastern Iowa Community College, 1829 State Street, Bettendorf, Iowa 52722.

Career Guidance In-Service Education — Los Angeles, California

A program sponsored by the Division of Secondary Education, Specially Funded Programs under the Elementary and Secondary Education Act, was held from October, 1967, to May, 1968. A series of nine sessions, combined with field trips to business and industry, formed the basis of the in-service training. Topics covered included "An Introduction to Career Guidance," "Survey and Display of Occupational Materials," "Suggested Curricular Approaches," "Community Resources and Services in the Disadvantaged Area," "Entering the Job Market," "Vocational Measures — Interest and Aptitude," "Group Dynamics," "Utilizing the *Dictionary of Occupational Titles*," "Multi-Media Techniques," and "New Developments" (Los Angeles, 1967).

Arizona In-Service Projects

Delbert R. Jerome, Supervisor of Vocational Guidance for Arizona (1967), reported these in-service training projects for counselors in 1967:

1) In one pilot program in a large metropolitan high school, four counselors were released from regular counseling responsibilities and reassigned to a field project. The counselor was to work with teachers, parents, and eighth-grade students in feeder schools. The main objective was to provide the field counselor with an in-service education related to local employment opportunities, employment policies, and employer attitudes. The counselor observed activities and interviewed employers and employees during a planned sequence of visitations to businesses and industries. A report of each visit was prepared for distribution to counselors throughout the state.
2) Another program consisted of a four-week workshop for 30 counselors in the state. After 18 hours of instruction on psychological theories of career development and vocational choice, the participants divided into six teams of five persons each to visit businesses and industries in the northern and central sections of the state. These reports are also to be distributed to secondary and college counselors.

Preparing Counselors for Developing a Maximum Range of Vocational Maneuverability in Students — South Bend, Indiana

Eldon Ruff (1967) reported a three-week summer workshop for 18 school personnel in northern Indiana in the summer of 1967. The project was intended to train counselors from 14 different high schools to become vocational guidance specialists. An elementary and junior high school counselor and two administrators were also included. The specialist has the responsibility of keeping up-to-date on changes in the job market, training and educational requirements for various entry jobs, and alerting guidance, administrative, and teaching staffs to current vocational information. He also is the liaison between the school and business and industry regarding vocational guidance.

The first week of the workshop was didactic, with presentations by national authorities in vocational guidance, panels, and small group discussions; the second and third weeks were spent in discussions of the relationship between curricular offerings in the schools and occupational opportunities in the community. Specialists were brought in daily to lead discussions in their specialties. Planned observations and experiences in the six vocational areas covered by vocational education in Indiana were scheduled with discussion periods to analyze the observations. These included distributive, business, health, home economics, agriculture, and trade and industrial occupations.

General Electric Summer Guidance Fellowship Programs

Summer Guidance Fellowship Programs sponsored by General Electric were held again in 1967 at two universities — Boston University and Univeristy of Louisville, Kentucky. Fifty secondary school and junior college counselors from public, private, and parochial schools in several states were selected for the all-expense fellowships. The programs were operated by each university and consisted of graduate study supplemented by a coordinated program of study and observation of occupations for high school and college graduates. The sessions included presentations, discussions, interviews with employees, and industrial visits (General Electric, 1967).

Goodyear Tire and Rubber Company Project

Akron, Ohio, also has had a "School Counselor's Summer Work Experience Program." Goodyear Tire and Rubber Company hires selected counselors to work eight weeks in the types of jobs open to high school graduates. They rotate in various departments and learn about hiring procedures, types of jobs available, and needed training. In addition to being paid, they may earn graduate credit by attending seminars at the University of Akron. Now in its fourth year, the plan has added a new dimension by hiring student observers. One student representative from each Akron high school was hired for one week to learn about different phases of the industry's operation and about job requirements and opportunities. The plan is to use the students as resources for units and assemblies. The program was aimed at giving counselors a better picture of the industrial scene (Lewis, 1967).

Firestone Tire and Rubber Company

A committee of employees from the Firestone Company and of counselors from various Akron schools planned and coordinated a six-week program for eight counselors and 36 high school students. The counselors were employed for six weeks, and six different students were involved each week. The counselors and students went through the hiring process and spent their time in tours, observations and seminars. A slide presentation was developed by Firestone and given to each participating counselor for use by counselor-employee-student teams which will visit Akron schools. It is hoped that the program will make students more aware of employment requirements and job opportunities (O'Dell & Richards, 1968).

Distributive Education Pilot Training Project in Career Development — University of Minnesota

Under the directorship of Warren Meyer and Wesley Tennyson, a five-week Pilot Training Project in Career Development for 30 distributive education teachers was held during the summer of 1967. The second phase of a two-summer program, the institute consisted of courses in career development theory and counseling, business and industrial visits, part-time employment, small group experience, and a coordinators' practicum. A similar workshop, held in the summer of 1968, included both counselors and teachers and focused on both career development and the occupational experience (Tennyson & Klaurens, 1968).

Counseling for Industrial, Trade, and Technical Occupations — Dunwoody Institute, Minneapolis

To provide counselors with more direct information about Twin Cities industries, Dunwoody Institute has, several times, offered a six-week course for 35 counselors. Following a general orientation to industry, labor, and vocational education, the course involves visits to selected industrial plants where company representatives discuss job skills, kinds of workers, and work performed. Each visit is preceded by a general presentation of information about the industry in general and is followed up with discussions. A nominal fee of $25.00 is charged, but each time offered, the course has been over subscribed by counselors seeking to improve their knowledge of the world of work (Dunwoody, 1966).

Summary

In this chapter, descriptions have been presented of a variety of career guidance activities for students, teachers, and counselors. Most of these involve the community, in that the projects were either sponsored independently by business and industry, or more often, jointly with the schools. They frequently involved two-way movement, with representatives of the community coming into the schools, and representatives of the schools (students and staff) getting out into the community. In many instances, particularly in the workshops, programs were funded under various types of federal legislation. There are many other projects which involve school-community cooperation, and, as previously indicated, this list was not intended to be exhaustive. Because of the overemphasis on counseling the college-bound, many of the programs here deal with the employment-bound. The expanding nature of such cooperative programs does seem to suggest an awareness on the part of both school personnel and industrial representatives of the need for bringing the two communities closer together and presenting more accurate and comprehensive information about all the alternatives available in the career guidance of youth. A number of the projects described in the next chapter also involve schools and industry, largely in computer-based approaches to guidance.

Chapter IV

CAREER GUIDANCE UTILIZING ADVANCED MEDIA AND TECHNOLOGY

The possibilities for utilizing advanced technology in career guidance stagger the imagination. A number of research and pilot projects are under way in several states to translate the advances of modern technology into information systems which are likely to have a strong impact on vocational guidance in the schools.

In a series of conferences devoted to utilizing technology for career decision-making, a group of researchers met periodically to discuss problems, solutions, and innovative approaches in 1) computer-assisted counseling, 2) gaming techniques, and 3) communications media (Campbell, Tiedeman, & Martin, 1966). One of the conference reports suggests that school guidance and counseling objectives in career guidance are not being met because of two basic information-handling problems: 1) human fallibility in memorizing and recalling educational-vocational facts and 2) the inability of the counselor and student to devote sufficient energy and time to performing the numerous information-processing tasks related to career information. Thus, it is poined out, career orientation is frequently neglected (Minor, 1967). What is needed, the report suggests, is an automated occupational-educational information system to help both counselor and student at all levels.

Among the concerns of these researchers are: 1) the optimum allocation of functions among student, counselor, and machine; 2) a data base taxonomy, i.e., ways of classifying and partitioning factual data for maximum and efficient student use; 3) the measurement instruments used in a computer-based system; 4) system display media and response media, from books to multisensory displays under computer control; and 5) the characteristics of the client population, i.e., ability of clients to handle verbal material and the development of several levels of language arts materials to accommodate different ability levels (Minor, 1967).

The work being done throughout the nation includes major research projects designed to determine ways in which computers can be used in counseling and information-processing tasks (collecting, storing, and retrieving data). Many of them are projects developed through the cooperation of city school systems and private industrial firms. Others are smaller pilot projects undertaken in independent schools. Some are concerned primarily with the development of various materials in other than printed form. A few experiment with new techniques and procedures such as simulation and gaming. Although many of the projects are still in the research, development, and planning phase and are yet to be implemented, they form a significant aspect of career guidance trends.

Types of Information Systems

Discovering ways in which the counselor's work can be aided by the machine through "information systems" has been the purpose of a number of projects. At an Information Systems Workshop in Dallas sponsored by the American Personnel and Guidance Association and the University of Michigan Educational Resources Information Center (CAPS), "information" was defined as the reduction of uncertainty. A system was defined as "a set of interrelated elements operating in some coordinated way for what might be a common purpose [Walz, 1967]." Loughary defines a guidance information support system as "a set of planned procedures in which man and machine capabilities are used in an integrated manner to achieve results man could not achieve without the machine [1966]." He suggests the following categories of information systems for guidance:

1) *Educational-Occupational Index System.* This could be a national system of vocational-educational reference information. The counselor's objective would be to maintain, from the countless number of publications available, a selected collection of materials most appropriate for his particular population. He would also need to have access to a system for selective acquisition of additional materials as needed. Such a system would have the advantage of making vast amounts of appropriate information available to students on call, a much more reliable, comprehensive, and accurate source than what Loughary calls the counselor's "I would imagine machine." Some regional systems of this nature are already operational.

2) *Occupational Opportunity System.* This information storage and retrieval system would be developed on a regional or state basis to provide accurate, up-to-date information about job opportunities and the labor market, both for terminal high school students and college graduates. It might include such features as remote audiovisual interviews, for college graduates unable to make long interview trips, and specific stored job and company descriptions.

3) *College Access Monitoring System.* Because of the often confusing and

complex college admissions picture, it has been recognized that more efficient and effective ways must be found for processing applications and admissions information. Random access computer storage of up-to-date admissions status of participating colleges along with information about student and college characteristics could be a tremendous boon to counselors involved in helping students with college decisions. A central nationwide computer-based clearinghouse for college applications also could do much to help eliminate the tremendous waste in time, energy, and money that characterizes the present multiple application sysem. The work being done by SCOPE (1967), described laer, is one step in this direction, and some limited commerical prototypes are also being developed.

4) *Guidance Research and Development Depository.* As evident from this monograph, such a depository already exists in the form of the Educational Resources Information Center (ERIC) Clearinghouse on Counseling and Personnel Services (CAPS). The CAPS Center, in operation since 1967 and one of several ERIC Centers around the nation, primarily serves counselors, counselor educators, and other pupil personnel workers. Although still in its infancy, this center is developing a storage and retrieval system of information regarding research projects, program development, and articles and documentation in the counseling and guidance or pupil personnel fields. When the system is fully operational, counselors wanting to try out new programs will be able to quickly "search the field" through CAPS and find out about other on-going programs or research projects. They can thus devote their efforts to adapting and improving upon the work of others rather than starting from scratch.

5) *Audio-Visual Presentation of Vocational-Educational Information.* There is a considerable body of literature reporting on the inadequacies of much printed occupational information. Although more research is needed, it is generally acknowledged that much of the past information available to students could be improved upon — whether in format, timeliness, objectivity, readability, accuracy, or other criteria. Utilization of technology to find more creative ways to present occupational information to students offers another fertile field for improving vocational guidance. Several research projects in this area are now in progress.

6) *Computer-Based Simulation Systems.* The use of simulation and gaming techniques for career decision-making is one of the newer approaches to vocational guidance. Perhaps the most well-known effort in this direction thus far is the Life Career Game developed by James Coleman and Sarane Boocock at Johns Hopkins University (Boocock, 1967). Simulation projects are described in greater detail later in this chapter.

The broad field of data processing provides another kind of school-wide information system involving not only the counselor and career guidance, but the total educational team. While the counselor is concerned about the types of data masses within a school (the information kept about students and the way in which it is used and by whom), the development of a school-wide system is basically an administrative concern, of which career guidance is just one part. Those aspects of the student record information which may have the greatest implications for career guidance involve the storage of test results and analysis, interpretation, and prediction, and the use of the computer in program-planning and decision-making with students. Although the data processing of student records concerns the counselor and may affect his work in significant ways, the focus in this chapter is less on data processing *per se* and rather on projects and systems more directly related to career guidance and counseling.

As already indicated, a few of these guidance information support systems are operational. Many of the systems already exist or are being researched, often under federal grants. Among the main sponsors are the U.S. Office of Education and such agencies as the Division of Adult and Vocational Education, the Projects to Advance Creativity in Education (PACE) programs funded under Title III, Elementary and Secondary Education Act of 1965, and the regional educational laboratories. Private agencies, such as the College Entrance Examination Board, Educational Testing Service, and American College Testing have entered the picture, as have commercial producers of guidance materials such as Science Research Associates and Chronicle Guidance Publications. Private industry also has become involved, notably, IBM, 3M Company, Westinghouse, Radio Corporation of America, Kodak, and Systems Development Corporation. A sampling of the major research projects and pilot programs relative to career development and career guidance is described below.

MULTIMEDIA TECHNIQUES

VIEW and the Regional Career Information Center — San Diego

"Vocational Information for Education and Work" is the title of the main feature of the San Diego Regional Career Information Center developed by Richard Hoover, Martin Gerstein, Glen Pierson, and others. Six secondary schools were selected to participate in the pilot project designed to provide secondary school and junior college counselors and students with restructured, usable occupational information based on the local job market. The project incorporated provisions for occupational information, counselor inservice training, and the mobilization of community resources (Gerstein & Hoover, 1967).

Utilizing material from the Department of Labor, the Department of Employment, the California State Department of Education, commercial materials, and the recruitment literature of trade and professional associations, the researchers engaged students and counselors to screen materials to determine student informational needs. In cooperation with Minnesota Mining and Manufacturing (3M), a microfilm aperture card was designed to include all items students and counselors ranked important: occupational requirements, job prospects, availability, training, and the names of persons in the community willing to serve as resources. The cards may be sorted on a number of variables such as aptitude, broad interests, and related school subjects. The system enables the counselor to provide the counselee with a list of occupations identified on the basis of counselee characteristics.

The material is available in counseling centers equipped with microfilm readers and reader-printers. The students or counselor may read the information or may make an 8½″ x 11″ printout of any or all pages desired. The advantages of the system, as reported by Hoover (1967), are: 1) inexpensive reference material is easily kept up to date; 2) information is specific to the local labor market; 3) it is easily stored and almost instantly accessible; 4) it contains items of information that students say is of most worth to them; 5) it is a valuable way to utilize the community labor market that students say is of most worth to them; 6) it is a way to utilize extensive research done by government agencies; and 7) the material is geared to the interests and abilities of students.

While the first phase of the project concentrated on trade and technical occupations, the second phase will focus on the hospital service field, because of the local opportunities in the area and the wide range of skills represented. Eventually, the hope is to cover the total field of career information. Now the project has acquired information on 200 occupations requiring less than a baccalaureate degree for which training is available in San Diego County and for which there are local job opportunities. Ancillary projects include workshops for counselors on theories of career development and career guidance, including on-the-job experience (Pierson, Hoover & Whitfield, 1967).

Communication in Guidance Project — University of Pittsburgh

A program geared to noncollege youth, this research project, also known as the "Multi-Media Approach to Occupational Information," includes the design, development, and tryout of occupational information using several media simultaneously: slides, filmstrips, video tapes, and movies. Ann Martin, the project director, has tried to identify kinds of job data and methods of communicating occupational information that will bring about a change in student motivation for vocational-educational training and career planning (1966). She began with an Occupational Information Survey of eighth and twelfth graders in the Pittsburgh area to determine factors which influence their vocational decisions. Follow-up interviews were scheduled with a selected sample of seniors to determine what was happening to students vocationally. Martin also has attempted to secure information on the range of occupations in the local area.

In brief, she has attempted to translate elements of self, education, and work into a series of brief film modules. High school graduates have been recruited to star in the films, and include those gainfully employed, those unemployed and seeking employment, the young married, and the graduate pursuing additional education. Differences in race, sex, background, and socioeconomic status are represented in the modules. Audiovisual materials describing the types of jobs for which education and training programs are available will be developed, along with presentations showing high school graduates behaving and interacting in the job interview situation.

Audio Tape Messages

Experimenting with a type of "juke box counseling," Thomas Magoon (1965) at the University of Maryland has developed single and multiple occupational information messages on tapes. The system is based on a programmed instruction or automated learning situation in which, for example, a counselee waiting for an appointment might put on a set of earphones and tune in information about a field in which he is interested. Richard Rundquist (1965) at the University of Kansas has, over several years, developed a tape library of occupational interviews in which students may listen to tapes of workers intended to serve as role models.

A Model of Effective Problem Solving Applied to Educational-Vocational Planning

In a highly-structured situation in which a counselor works with four clients at a time, Thomas Magoon (1965) developed a problem-solving model for educational-vocational planning. His students were a group of minimally achieving high school seniors in a Pre-College Summer Session (PCSS) at the University of Maryland. The key feature of this approach was that the counselor served primarily as a consultant to self-directed learning.

That's My Business — Atlanta, Georgia

To overcome some of the dissatisfactions with traditional "career days," the Atlanta Public Schools developed the television series entitled "That's My Business," utilizing local educational television. (See chapter 3 for a more detailed description.) Under the plan, high school students visit persons employed in various occupations on the job. Students are encouraged to ask workers questions they feel are important about the occupation. The programs can be televised live in Atlanta schools. By video taping, they also can be preserved for later viewing as desired. The Atlanta Schools also have produced films showing counselors at work helping students plan, thus trying to bridge the gap between the TV films and counseling (Campbell, Tiedeman, & Martin, 1966).

Edu-Cast — Detroit

Better known as the "World of Work" (WOW) series, this commercially-produced series of materials is intended for use from grades kindergarten to nine. It is presented as an answer to many of the deficiencies in the preparation of students for entry into the world of work. Developed in grade levels of kindergarten to three, four to six, and seven to nine, the materials include films and records on the "Wonderful World of Work." The program is called a "Pre-Vocational Orientation and Attitude-Building Program." In brief, informational, realistic filmstrip treatments, it provides an introduction to building vocational awareness. Like Frank's unit, described in chapter 2, it is geared to children's expanding worlds. The kindergarten to three series presents "Wally the Worker Watcher," "Animals and Work They Do," "Junior Homemakers," and "The Newspaper Boy." The four to six sequence presents "What Else Do Fathers Do?" and "The World Around Us," with the concept of occupational clusters. The program for grades seven to nine, "A Mountain Worth Climbing," focuses on staying in school, with thumbnail occupational clusters. Industrial areas covered include transportation, manufacturing, energy transfer, personnel service, commerce, natural resources, instrumentation, and chemicals. The emphasis throughout is on vocational orientation and vocational awareness. It is intended as a supplement to the social studies curriculum, or as part of the elementary and early secondary curriculum, depending on the particular organization of each school. Levels kindergarten to three, four to six, and seven to nine are ready for distribution. There are 50 color filmstrips with teaching guides.

SEARCH — Boston

A program for college selection by computer, this commercially-produced approach assists students in analyzing their individual interests. After consulting with his parents and a counselor, a student completes a College Preference Inventory with 72 multiple-choice items regarding cost, location, curriculum, type of school, and so on. The form is sent to SEARCH in Boston, translated into a computer language card, then processed through a computer, and compared to admissions data on 2,837 colleges and universities. The machine prints out a personal letter listing the 10 colleges which most closely meet the student's preferences. Additional college admissions information is also sent, and the student is urged to consult his school counselor. The 10 preferred schools are supposed to match the applicant's goals. The SEARCH program has information about every two-year, three-year, and four-year college in the United States. The cost is five dollars.

Guidance Associates Films and Filmstrips

The Division of Guidance and Testing and the Division of Vocational Education of the Ohio State Department of Education have developed a series of filmstrips and records oriented around the general theme of helping high school students recognize relationships between vocational-technical education and occupational choice. The filmstrips originated from the recognition that non-college-bound students need to be made more aware of their needs for, and opportunities in, public school vocational-technical education programs at the high school level and post-high school technical education programs. Great care was exercised in making the filmstrips appealing to high school students and in covering a wide range of areas. The first filmstrips were published in cooperation with Ohio State University and Guidance Associates, Pleasantville, New York. Among the career-related topics are "Preparing for Jobs in the 70's," "What You Should Know Before You Go to Work," "I Wish I Had Known That Before I Went to College," "The Tuned-Out Generation," and "The Accomplished Generation." The filmstrips, with accompanying records, are intended for use by individual students and/or group guidance at the junior or senior high level. They are short and purposely designed as motivational. The availability of desk-top projectors for individual viewing makes the materials adaptable to a variety of individual and group situations (Guidance Associates, 1968).

Guidance Associates also has prepared a series of 40 vocational interview cassettes/tapes geared primarily to skilled and technical nonprofessional occupations. For use with the employment or trade school-bound student, the cassettes consist of on-the-scene interviews with workers about their job satisfactions and dissatisfactions and the route by which they got there. The tapes attempt to get at life-style considerations of jobs. Persons interviewed include a licensed practical nurse, a tool and die maker, a long-haul truck driver, a photographer, etc.

While the Guidance Associates materials are fairly costly, they offer a wide selection of audiovisual materials which can assist in career guidance programs. One school has reported a joint Guidance-Social Studies Career Information Project in which the vocational interview cassettes are being used. Another is developing the individual carrels for listening, viewing, and independent perusal of career resources in its Career Resource Center.

Demonstration Occupational Information Dissemination Unit

George DuBato (1967) reports on a pilot study to determine the feasibility of establishing a model for an occupational information dissemination unit. It would operate between the New York Employment Service and the New York State Education Department for secondary schools and two-year colleges. The project began by determining, through questionnaires and interviews, the occupational information needs of students, counselors, and other educators, noting what occupational information resources were available, and what needed to be done to improve the available occupational information.

A cooperative agreement was reached between the New York State Education Department and the Employment Service for a joint program of occupational information preparation and dissemination. The Employment Service is distributing 200 occupational guides for secondary schools and two-year colleges, using a format patterned after the VIEW scripts used in the Career Information Center at San Diego. Specific new features incorporated into the guides were determined from the findings of the questionnaire survey. A specific process for the selection of occupational titles has been developed.

The project was sponsored, for 1967–68, by the Board of Cooperative Educational Services of Nassau County. Nine high schools and three two-year colleges will be part of the continuing study for use of the newly-developed occupational guides.

ECS Computerized Scholarship-Search Service — Princeton, New Jersey

Developed by North American Educational Computer Services, this is a service through which students are aided in obtaining financial assistance. The student fills out a detailed confidential questionnaire about himself, his background, and his goals. The questionnaire is sent to ECS where the computer matches the student's qualifications against the requirements of over 700,000 scholarships and grants worth over $500 million. The computer then types a personal letter to the applicant, telling him what scholarships he is eligible for and when and where to apply. The fee for students is fifteen dollars. The directors report that two years of research went into the service, and that information is updated. Many of the items are not dependent on financial need or scholastic standing.

Chronicle College Viewdeck

A "step away from the computer" might be one way of describing the commercially-produced *College Viewdeck* by Chronicle Guidance Publications of Moravia, New York. Designed to assist college-bound students in finding institutions which fit their requirements, the Viewdeck "stores" information about 2,100 two-year and four-year colleges. Through a card-sort, see-through system, the student selects cards which identify his college preferences in size, geographical location, cost, type of student population, accreditation, public or private sponsorship, and field of study. The numbers which show through the Viewdeck direct him to specific colleges in an alphabetically arranged and numbered directory. From there, he can go to college references, catalogs, and bulletins for information about the specific institutions which interest him. The machine provides a self-directed college-finding experience for the student and helps him to rely on other means than the counselor for obtaining his information. It can help him become aware of the differences among institutions of higher learning as well as force him to make some tentative decisions about which characteristics of institutions are important or relevant to him.

College Occupational Exploration Kit — OccuSpan

Developed by Science Research Associates, OccuSpan is part of a College Occupational Exploration Kit designed to help students explore job opportunities. A refinement of an earlier kit, this one has several components which make it possible for a student to explore a variety of occupations based on 1) his own expressed occupational preferences, 2) the amount of education he plans to obtain, 3) his word ability, 4) his number ability, and 5) his preferred activities (interests). Through a card-sort coding device, the student can identify a number of occupations described on SRA Occupational Briefs. He is also encouraged to browse in other materials which are part of the kit. The 400 briefs, which are part of the kit, are also listed on a checklist in the Occupational Exploration Kit Guidance form, an important part of the exploration process. The guide also contains listings of job families which relate fields of study to jobs. While not a career-selection device, the College Occupational Exploration Kit and OccuSpan give the student an opportunity to explore occupations in relation to some important personal dimensions.

Admissions Search Kit

Part of a newly-developed college information service, this project is jointly sponsored by Minnesota Mining and Manufacturing Company (3M) and the Association of College Admissions Counselors (ACAC). It is designed to simplify and expedite college selection and admissions procedures. Alphabetically arranged by state, the Admissions Search Kit (ASK) contains entrance requirements and other pertinent data about some 2,700 colleges and universities. The kit, designed for placement in high school libraries, counseling offices, and guidance centers, enables a student to identify a number of colleges for further consideration. Copies of the appropriate ASK file data can be made on school copying equipment, so that the student can develop his own college admissions information kit. Admissions data are printed on one side and, at each college's option, a description of the "flavor" or climate of the college on the other. Another tool for college planning, this one gains its uniqueness through the "take home" feature made possible through the availability of duplicating machines or copiers to the student. Another college information storage type program is the Comparative College Guide device of Harper and Row, New York.

Life Career Game

A number of projects are incorporating gaming and simulation into their programs. Among the most well-known and well-publicized works on simulation or game strategies in relation to vocational guidance is the Life Career Game. Coleman and Boocock developed the Life Career Game in which teams of two to four players make decisions for a student like themselves (Ann, Bob, Mike, or Liz) in the areas of education, occupation, family, and leisure. The game consists of 10 rounds with each round representing one year in the life of an individual. Tried out by the creators on several populations, the game is reported to be highly motivating (Boocock, 1967). While the literature does not agree on the efficacy of academic games in general, and while there is a lack of empirical evidence of the learning value of such games, pilot projects using the game are under way in a number of schools as one approach to career guidance. Among the advantages of the game, Boocock reports, is that it helps reduce the gap between the adolescent and adult worlds by providing vicarious experiences in decision-making, which are usually deferred until much later in life. The game teaches about

- — how life cycles of men and women are patterned
- — the way in which decisions about occupations, education, family life, and leisure are interrelated
- — what factors affect a person's success and satisfaction with his job, marriage, and free time
- — what kinds of educational and occupational opportunities are open to individuals with varying sets of personal characteristics
- — how to locate and use reference material.

The game helps players see that there is no "right" decision and that an individual may choose different paths to the most successful or satisfying life for him. It is intended to help clarify student values and to help students see that career decisions are long-range, tentative, and interrelated. Through unanticipated events (such as promotions, the draft, or having a child), players learn how random factors affect choice and planning. A computer version of the game is now being constructed and tested (Minor, 1967). Johns Hopkins is also developing a curriculum unit built around the game. The game is available in revised form (for $10 plus mailing costs) through Miss Linda Harry, Academic Games Associates, Johns Hopkins University, Baltimore, Maryland.

Barbara Varenhorst (1968) has done research on the game with a group of underprivileged children, using it as a group counseling tool. She has worked closely with Boocock in modifying the game and its rules and has developed the revised form which was published directly by Johns Hopkins in May, 1968. In her work with students in the Palo Alto Unified School District, she had students write their own profiles and used these as a basis for playing, rather than using the four profiles which come with the game. She reports that this allows for greater student identification with the game as individuals.

The author has been involved in using the Life Career Game with teachers and counselors in an occupational information class and with ninth graders in a career unit team taught by counselors and teachers in the social studies class (see chapter 2). The following is a brief description of the game as played in the unit (Hansen, 1967).

The Life Career Game formed the nucleus of the four-week careers unit taught in three freshman economics classes in the spring of 1968. The game itself was used to introduce the unit because of its motivating characteristics. It was played for about six days. Because of the complexity of the regular rules, a set of simplified rules was drawn up by the counselors. There was quite a discrepancy in response to the game in the three classes, one being moderately interested, one resisting it as "unrealistic," and one so enthusiastic students could scarcely wait for the next day or round. All three classes became very involved in the scoring and competition and each team wanted to win.

During the game, players must go to a Job Table if they want to apply for a job, or to a School Table to apply for a college or vocational school. Here they learn certain information about the labor market and about occupational-educational requirements. Students were subsequently tested on this information. The instructors used a great many supplementary materials from the student handbook. With the student teachers, counselors, and regular teacher circulating from team to team, the situation proved to be an excellent micro-teaching experience and stimulated some heated discussions of values. At the end of the game, students evaluated it and were asked to write their own profile, including their abilities, interests, backgrounds, educational commitment, and values. They were to bring their profile to the individual counseling interview at the end of the unit. An analysis of student questionnaires, of the information test, and of student reports indicated varied opinions of the Life Career Game, but generally positive attitudes. An evaluation meeting between the counselors and social studies department resulted in a number of changes planned for the following year.

Even without objective evaluative data, the teaching team has definite ideas for restructuring the unit and for improving the game. Many of the student criticisms regarding level of income, amount of time required to study in order to get good grades, requirements for college admission, and so on, were legitimate. It seems advisable, too, to have students use or write a profile of a student more like themselves. As *one* tool for helping students look at their values, the world of work and education, and the exploratory process, the Life Career Game seems to have possibilities, especially if modified and combined with other group guidance and individual counseling experiences.

An adaptation of the Johns Hopkins game has been developed and tried out by Ross Braland, a counselor at Metcalf Junior High School in Burnsville, Minnesota. Used in a ninth-grade occupations unit, the game has been considerably simplified. Among the novel approaches, Braland has created "random factor" cards, which might be likely events at each grade level, rather than use a general set of chance cards as in the original game. In this sense, the events of the game become more realistic. He also has the game culminate with team members recreating and sharing their person's life history with the rest of the class. Another variation is the personal reinforcements the counselor gives to student decisions at various stages of the playing.

Research has also been done with a Life Career Game for elementary school students. Marvin Barbula (1967) in San Diego is developing simulation materials and modifications of the Boocock Life Career Game for sixth, eighth, and tenth graders. He has developed profiles of two entering seventh graders, Jim and Ann, and two entering ninth graders, Bob and Diane. The profiles include attractive pictures in a yearbook-type format. Students are told to think about appropriate plans for their profile student. Same-sex teams of two are told to write a "Life History Chart" which they use to convince other teams that they make the best plan. Barbula has adapted application forms and job information sheets and has added sample diplomas from high school, college, and trade school. He has also added "Year-End Summary Questions" after seventh, eighth, ninth, tenth, eleventh, and twelfth grades. The adapted form is intended for use by sixth- and eighth-grade classes toward the end of the school year. Each team simulates a typical week in each of several years in the life of its person.

The game, at this level, is intended to help pupils learn things about school and work which will assist them in their planning. These include:

1) a general idea of courses required for junior and senior high school;
2) an idea of the differences between a college preparatory program and a general high school program;
3) the different types of information a person should consider before selecting a particular program;
4) how individual differences in ability, interests, and other factors affect grades;
5) a general idea of the relationships between school subjects a person selects and the work he would like to do as an adult;
6) knowledge that some jobs require a greater educational commitment than other jobs;
7) the fact that a person may have to change his goals and aspirations when faced with limitations such as low grades, lack of financial means, ability, and other factors;
8) an awareness that the job market is constantly changing and a recognition of the large number of available jobs;
9) familiarity with a number of career-related terms such as occupation, GPA, goals, and vocational courses (Barbula, 1967).

Vocational Simulation Kits

In a research project funded under a U.S. Office of Education grant, John Krumboltz designed three studies to develop and test job simulation kits which would be relatively inexpensive, easy to administer, and a simulation of actual job experiences (1967).

The studies developed and experimentally tested five simulated problem-solving occupational experiences in accounting, medical laboratory technology, X-ray technology, and sales. The banking problem-situations were produced on film. The materials presented problems typical of those encountered by workers in the five occupations. They presented information necessary to solve the problems, gave the subjects an opportunity to solve them, and allowed subjects to compare their answers with the correct ones.

Accounting. It was hypothesized that juniors who were given an opportunity to solve simulated occupational problems in accounting would engage in more career information-seeking than subjects given either information about accounting or general occupational information. The results of the study indicate that interest in accounting was increased by the problem-solving treatment. Of the counseled subjects, those who experienced problem-solving sought answers to questions involving a greater number and variety of occupations. Of the subjects who requested counseling, the experimental group requested occupational information of a significantly greater specificity (Krumboltz, 1967).

Medical laboratory technology, X-ray technology, and sales. Problem-solving booklets were prepared for each occupation. The results of the study indicate that problem-solving treatment produced more interest in working on similar booklets on different occupations. Problem-solving students indicated more knowledge of what would be expected on the job and what it would feel like to work at a particular occupation. They also reported writing more requests for occupational information. The problem-solving treatment seemed to be particularly effective with subjects from a low socioeconomic area school (Krumboltz, 1967).

Banking. The active-overt participation film presents five problems from five bank jobs and stops five times while viewers select their problem solutions and record them. The active-covert film presents the same content, but viewers "think about" their responses. In the passive participation film, the content is the same, but no problems are presented. Results indicate that subjects who viewed the experimental films showed higher interests in banking occupations and more favorable attitudes toward banking than did controls. The overt responders engaged in more vocational exploratory activities during the month following treatment. Female subjects evidenced greater inventoried interest in banking occupations than male subjects.

Two conclusions seemed apparent from the studies: 1) Problem-solving "Career Kits" consistently produced more interest and more occupational information-seeking than other treatments; 2) Subjects from lower socioeconomic schools consistently gave more positive reactions than subjects from middle-class schools, particularly in response to the problem-solving approaches (Krumboltz, 1967).

COMPUTER-ASSISTED GUIDANCE

Educational and Career Exploration System (ECES)

A project begun in 1966 called the Educational and Career Exploration System has been undertaken in conjunction with SRA, IBM, and Columbia University by Donald Super, Frank Minor, and Roger Meyers. Designed to assist in educational-vocational exploration in a secondary school, the system has been field-tested with 200 students in grades 9–12 in Montclair, New Jersey. Purpose is to help the student understand his multipotentialities and to broaden his knowledge of vocational and educational paths compatible with his abilities, values, and aspirations. (Minor, et al, 1969). Hardware for the system includes a screen with keyboard and typewriter, a film-image projector, an IBM 360 computer (located a distance away), and terminals.

The data-base — the material in the computer and how it is used — includes school grades, aptitude test scores, and interest inventory results fed into the computer by counselors or supervised clerks using "Coursewritor" computer language. The student consults with his counselor about where to enter the system and may start with whatever suits his needs: vocational orientation, educational orientation, and the like.

If the student chooses vocational exploration, he selects from a data base of 375 occupations those he wishes to study. He is given brief bits of relevant information — samples of work done in the occupation set up for the student to do himself and brief statements about educational requirements and working conditions. The computer asks him questions about his reactions to the facts and provides continuous feedback on appropriateness of choices. Comparison of objective school data with subjective self-estimates is designed to promote realism in the student without damaging his ego (Super, 1969).

For educational orientation, the student explores curricular preferences in 300 fields in technical schools, junior colleges, and universities. From its pool of information on 1500 post-high institutions, the computer provides printouts for use by students, counselors, and parents on those institutions which seem to meet the individual's specifications. If there are disagreements between the objective data and self estimates, he is told where he and the tests disagree, not for prescription but as "food for thought" [Super, 1969, p. 6]. Questions and answers are stored in summaries for later referral and review.

The field trial for the system in Montclair High School (a comprehensive public school serving all socioeconomic levels in grades 9–12) included a stratified random sample experimental group of 200 students and a matched control group. Students were to use the system once each week for 40 minutes plus whatever additional time they wanted to schedule. They could use the system as many consecutive weeks as desired during three months of the spring term. Objectives were to determine what kinds of students use the system, what parts they use, and with what effect on their educational-vocational planning and decision-making [Super, 1969, p. 8]. Counselors kept a record of student contacts and a project investigator also made observations. Data were collected from students on abilities, interests, educational-vocational aspirations and plans — to be used in assessing vocational maturity and decision-making skills.

Results have been determined by computer-recorded data on student use and observations and reactions of counselors, teachers, parents, and students themselves. Counselors, although remaining somewhat aloof to the experiment, were generally favorable toward the system. They saw it as producing an increased use of the occupational information library, as a useful supplement to the library and their own counseling, and would like to see it regularly available to 9th and 10th grade students and to 11th and 12th on referral or demand [Super, p. 9].

Half of the teachers reported hearing favorable student evaluations both in content and method and also rated the system "good." The 50 per cent questionnaire response from parents was also favorable with similar reactions from parents of college-going and non-college-going students. They would like to see such a system generally available to their children.

Analysis of student data revealed that while the experimental group included ⅔ white, ⅓ black, ⅔ college-going and ⅓ non-college-going, there was approximately equal use by blacks and whites (7 sessions vs. 6.3 of a possible 12) and by college and non-college (6.8 vs. 6.4). There were significantly more boys using the system than girls (7.2 vs. 6.13) and a similar number of 9th, 10th, and 11th graders using the system. Reported effects on students included improved motivation, broadening occupational horizons, increasing awareness of the relationship between post-high school education and later careers, and increased realism in setting educational-vocational objectives [Super, p. 15].

While prospects for the future appear favorable, there are several needed developments to determine whether this type of intervention in this period of time produces significant changes in any students. Included are improvements on the terminals, mass production of terminals to make them more readily available to users, broadened data base to cover more occupations and training opportunities, longer-term tryout (at least two years and preferably five) in several high schools, and greater counselor involvement. Whether these will take place will depend on the awareness of 1) research personnel in industry, 2) of educators to the potentialities of computer-assisted counseling, and 3) of the hardware and software producers.

A Harvard-NEEDS-Newton Information System for Vocational Decisions (ISVD)

Probably one of the most ambitious and wide-ranging projects under way at present is the Information System for Vocational Decisions (ISVD) being developed by David Tiedeman and associates at Harvard, in cooperation with the Newton, Massachusetts, school system and the New England Education Data System (NEEDS). Drawing upon the earlier Harvard Studies in Career Development, the investigators are developing a computer-based system for educational-vocational decision-making. When completed, it will encompass most of the principles of career development mentioned in chapter 1. However, project funds have been cut.

In describing his system, Tiedeman (1965) points out that it is a man-machine one involving the inquirer (who might be from age four to retirement) and the supervisor (probably a counselor), as well as various kinds of occupational facts/data which will be converted into usable vocational information by means of personal inquiry and the help of a professional counselor. The areas of inquiry will be education, occupation, military service, and family living. Tiedeman puts great emphasis on the inquirer's assuming responsibility for his decisions and developing a purposeful plan of action for achieving his goals.

The ISVD focuses on the process of choice-making, rather than on choice of alternatives. The key aspects of the process are 1) review (of one's personal vocational history), 2) exploration (of self and world), 3) classification (linking the past, future, and alternatives), and 4) crystallization (of a purposeful plan). Tiedeman has put these into a context of vocational development tasks and psycho-social identification, and is developing a system of graded occupational facts/data appropriate at various times to users at different levels of vocational development. The major goal of the system is to create a developed and potentially available awareness of vocational possibilities in life (Tiedeman, 1965). According to Tiedeman, it will attempt to bring each person sequentially, at each choice point of vocational development, to a condition of readiness and confidence for him to act on his plan.

Tiedeman sees the ISVD as a mediator in the process of vocational development, a system fashioned to mediate choice behavior (Tiedeman & Dudley, 1967). Among the methods to be used in the system are 1) occupational information, presented somewhat in the style of the *Occupational Outlook Handbook*; 2) simulation games; 3) observational visits to see people at work; 4) supervised practice in decision-making; and 5) audiovisual materials (films, filmstrips, tapes, cartoons, booklets). It should be noted that rather than being an example of just one type of guidance support system, the ISVD incorporates the features of several. The ISVD prototype was expected to be available in September, 1968, and progress reports are available through the Center for Research in Careers at Harvard.

The occupational information currently consists of 850 job titles described in a coded system of 56 categories (including abilities, aptitudes, and other data) and 13,800 job titles from the DOT. A file of 800 jobs classified on Roe's two-dimensional system and 16 occupational groups with forecast data through 1975 are also being added (ISVD, 1968).

Project PLAN (A Program for Learning in Accordance with Needs)

John C. Flanagan, in cooperation with American Institutes for Research, Westinghouse Learning Company, and 12 school districts, has undertaken a research project designed to individualize the instructional system, including a guidance and individual planning program. The plan has grown directly out of Project TALENT data on 440,000 students in grades 9–12, gathered on a longitudinal basis. It is designed to remedy some of the educational deficiencies cited in the Project TALENT report:

1) inadequate provision for individual differences not only in level of academic ability and achievement but also in patterns of special aptitude and talent;
2) failure to assist the student in a) developing a sense of responsibility for his educational, personal and social development and b) making realistic educational decisions and choices to prepare him for adult roles;
3) need to broaden the focus of educational objectives in order to a) make planning and preparing for an appropriate occupational role an integral part of the educational program, b) give greater emphasis to preparing students for the responsibilities of citizenship, and c) give increased emphasis to those aspects of education which will help students in finding satisfying activities for their anticipated increased leisure; and
4) need for greater efficiency and flexibility in curricular and instructional methods (Flanagan, 1967).

The project will develop test items to measure the behavioral objectives set for the students. Teaching-learning units (TLUs) will be developed to cover sets of objectives grouped in a module, which are estimated to take two weeks for the average student to assimilate. The TLUs tell the student what instructional materials (of various types) he might best use to learn these objectives. Various units will be developed for a number of hypothesized student learning types. During 1970, 1500 secondary students in Project PLAN schools were expected to participate in the new highly individualized curricula geared to their abilities, aspirations, and media preferences. Each student's Program of Studies takes into account such aspects as pace, difficulty, and learning style (Melnotte, 1969).

A guidance and individual planning program with three main phases will be developed to give:

a) occupational information to all students on all occupations as a general educational objective;
b) continuing direct-meaning progress and developed-ability information based on tests and other assessment procedures to student, teacher,

and counselor (including probability data for various educational and career activities);

c) experience in both short and long-range decision-making aimed at developing skill and effectiveness in making sound decisions on important personal problems — for hypothetical persons and eventually for self (Flanagan, 1967).

The computer system, which will monitor student development and improvement, will be further developed.

At present, the program is being implemented in 12 school districts across the United States in grades one, five, and nine. The project is computer monitored or managed by an IBM 360/50 computer, which serves data storage and retrieval functions. It implements a developmental approach to school guidance, focusing on the integration of guidance-related content into subject matter areas. Guidance objectives have been specified, just as "instructional" objectives have been. Alternative instructional processes are being developed to assist a student in achieving specific behavioral objectives which he — in conjunction with his teacher, counselor, and parents — selects as most appropriate for him.

Within the Guidance and Individual Planning Division, the focus is on three major processes — planning, decision-making, and self-management — in each of six content areas, including 1) vocations, occupations, and careers, 2) educational opportunities, 3) learning behaviors, 4) social behaviors, 5) citizenship behaviors, and 6) leisure opportunities. Materials for grades one, five, and nine are in process now; the materials for the rest of grades one through twelve will also be covered, so that students in all grades will be using the system by 1970 (Jones, 1967).

In Project PLAN, the individual and his needs form the basic unit in the system, with evaluation emphasized at all stages of the educational process. The development of such an educational approach requires: 1) formulation of detailed performance-related educational objectives, 2) measurement and assessment devices for monitoring progress in attaining each objective, 3) development of guidance procedures for planning each individual's program in terms of performance-related objectives, 4) assembly and cataloging of modular teaching-learning units appropriate for various types of students, and 5) preparation of computer programs and procedures which may be effectively used by teacher and student (Flanagan, 1967). The main addition to present classrooms, buildings, and facilities would be a computer input-output terminal in each school building, in direct communication with a computer. The chief emphasis will be on independent learning and tutorial procedures.

Various computer programs essential to implementing this system include 1) a program for scoring and reporting test results, 2) the comparison of test performance with other criteria, 3) the listing of unit objectives appropriate for preparation of long-range goals, and 4) the comparison of student characteristics in terms of learning style, basic abilities, and special aptitudes.

System of Interactive Guidance and Information (SIGI)

The System of Interactive Guidance and Information (SIGI) being created under the direction of Martin Katz is concerned with utilizing the computer to assist junior college students in the process as well as the content of career decision-making. SIGI is concerned not only with helping students make wise career decisions but to make decisions wisely [Katz, 1969, p. 14].

Katz suggests beginning with values — active and systematic exploration of competing values, their source and their direction. One approach to value exploration is to try on different roles through role-playing such as that possible in career decision-making games. In SIGI the individual may look at values not as "givens" but as "constructs" which he is free to "reconstruct." When he has fully examined the range of values and has explicitly formulated his own, he will be ready to make a decision, one in which he has an active role and one subject to continual revision.

SIGI will not just give students an answer but will also suggest questions for which they may wish to obtain answers. It combines four sub-systems: a value system, an information system, a prediction system, and a planning system. In the value system, the student examines, explores, and perhaps reconstructs his occupational values. He assigns weights to such constructs as autonomy, altruism, income, prestige, etc., in terms of their importance to him. The information system provides answers to the capacity of each option to offer the satisfaction the student seeks. The prediction system indicates each student's probability of success or entry in each option. In the planning system, he specifies "next steps", encounters simulated problems and outcomes, and investigates alternative plans. The system leads to a ranking of options which combines "subjective utility with objective probability" [Katz, p. 17].

Focus in SIGI is clearly on developing competence in career decision-making. Efforts are made to increase the student's understanding of the factors involved in choice "so that he can take responsibility for his own decision-making, examine himself and explore his options in a systematic and comprehensive way, take purposeful action in testing hypotheses about himself in various situations, and exercise flexibility in devising alternate plans" [Katz, 1969, p. 17]. The system thus far is in the developmental stage.

University of Oregon GUIDPAK System

An entry-job vocational guidance system being developed at the University of Oregon by John Loughary and Murray Tondow, GUIDPAK is intended to help students who have neither college preparation nor specific vocational preparation in high school. General purpose is to maximize career development potential by providing exploration of high-quality entry jobs.

GUIDPAK involves students in compilation of local job data and incorporates evaluation both of self and entry-level job potential. Materials contained in the system include 1) those for structuring student job exploration 2) counselor monitoring of student experiences 3) multimedia resource career development and 4) local entry job and training opportunities and training and work experiences of recent graduates.

Although not computer-based, the system will include optional computer storage and retrieval programs. Design work was expected to be completed in June 1969 with subsequent building of the complete system and field testing [Computer-Based Vocational Guidance Systems, 1969, p. 153].

Rochester Automated Developmental Counseling System Project

An "action research" proposal for a joint venture between the Rochester, New York, public schools (1967), Eastman Kodak Company, and the Bureau of Occupational Education Research is an attempt to use information technology to increase the effectiveness of school counseling and assist the youngster as he functions in the school situation. The system is to be developed to fit the needs of its users.

Basically, the system aims to establish an electronic developmental counseling system which will enable each student to 1) understand himself better, 2) understand the school better, 3) understand better the need for schooling, 4) acquire accurate information as needed in a form in which it can be used, and 5) learn how to make decisions and plans.

The immediate goals are to develop in each student an awareness of himself, the world of work, and occupational structure and trends; and to help him learn about the meaning of work, job satisfaction and dissatisfaction, the process of occupational exploration, and the processes of problem-solving and decision-making.

The system will include: a) computer-based storage and retrieval, b) terminals in the schools, c) a program which will enable the computer to carry on a dialogue with students, and d) accurate up-to-date information about the world of work. The profile data of each student will be accumulated at the school, graded work data will be stored at Kodak, and terminals will be operated within the school interacting profile data with work data. The proposal attempts to integrate the need for storage and retrieval of information at different developmental levels, for a computer-student dialogue, and for effective storage and handling of occupational information.

Information on 166 job titles has been collected from a variety of sources, including the *Dictionary of Occupational Titles*, the *Occupational Handbook*, employers, unions, colleges, schools, local resource persons, career fiction and biography, and audiovisual materials. Two computer programs generate lists of job titles based on student-suggested criteria.

The project is accumulating a file of life career studies: slide-audio vignettes of workers in the local area, usually including one woman and one minority person and showing work samples, career patterns, and role models. Student photography is also being used (Youst, 1969).

Bartlesville Total Guidance Information support system — Oklahoma

A feasibility study under the direction of Thomas L. Roberts has been completed for developing a Total Guidance Information Support System (TGISS) in the Bartlesville, Oklahoma, Public Schools. The project includes the projected development of a rationale and general theoretical framework for "intelligent" student decision-making in interaction with a computer.

Computer technology is to be utilized to provide the counselor with information relevant to student decisions in the areas of 1) academic course selection 2) vocational course selection 3) learning commitment 4) extracurricular activities 5) noncurricular activities 6) continuation of school 7) college selection 8) job selection 9) military obligations and 10) marriage. Steps planned in designing the system include 1) determination of a vocational development framework 2) identification of types of information required by students in decision-making and 3) delineation of the role of the counselor in facilitating decision-making [Computer Based Vocational Guidance Systems, 1969, p. 167].

Autocoun — Palo Alto, California

Some of the pioneer efforts in utilizing the computer in counseling have occurred in California. Autocoun is an attempt to simulate, with a computer, certain aspects of the behavior of an "expert" counselor. Forty junior high school students were counseled with the system and by either the counselor after whom the system was modeled or another counselor (Loughary, Friesen, & Hurst, 1966).

While it was recognized that a computer could not do all of the things a human counselor can (empathize, accept, and support), it was assumed that a computer could be programmed to simulate some counselor behavior such as adding grade points, looking up scores, converting scores, reporting scores, and even making predictions regarding school or occupational achievement.

Although initial plans were to identify the pre-interview and interview behavior of a select group of "expert counselors" identified by counselor educators and supervisors throughout the country, because of differences in counselors, it was decided to develop the system on the basis of one counselor. A flow-chart was developed for each interview, and a composite flow-chart was developed as a framework around which to build the program and to discover the rules being used by the counselor in making decisions or recommendations about students. The pre-interview simulates the appraisal and preparation done by the counselor, and the actual interview aims at getting the counselee to decide on a long-range course of study. The computer analyzes certain pupil appraisal data commonly found in cumulative folders and makes a number of predictive statements regarding a student's possible performance in high school and college courses. The computer calculates GPA, looks up a student's scholastic aptitude scores, and then selects expectancies from prediction tables based on local norms (Loughary et al., 1966). The expectancies serve as rules for estimating the "goodness of the pupil course choice." The computer also prints out a list of course choices for grades 10, 11, and 12 and provides a printout to counselors identifying students who need additional help.

The experience tables indicate the probability (in chances out of 10) that a student with a particular GPA in grade nine and a known scholastic aptitude score will receive either an A, B, C+, C, or below C average in his course work in high school. Similar predictions are made about the probability of a student's being accepted at different kinds of colleges. A time-sharing system was used with input and output to students via a TWX Model 31.

In the tryout of the system, the aim was to simulate counseling to the extent that students' decisions with the computer's help would be of the same kind as with the counselor's help. An analysis of results indicated that the machine system agreed with the human counselor on approximately 75% of the appraisal statements. As for course plans, there was 65% agreement between the human counselor and the machine on 10th and 11th grade plans.

Regarding attitude, it was reported that: 1) nearly all students had a favorable attitude toward both counseling modes but were more positive toward the human than toward the automated counselor; 2) pupils felt that the human counselor had a greater *amount* of information; 3) pupils felt the human counselor would know more about interests and personality; 4) pupils felt that the machine had more specific and factual information regarding such things as GPA and college requirements; and 5) 38 of the 40 students said they would like to see the machine used regularly in the school, but in conjunction with human counselors. The investigators suggest that while Autocoun in its present form will not replace school counselors, it does demonstrate the feasibility and potential value of a computer-based pupil information system (Martin, 1966).

Research continues in the Palo Alto School District on a "Computer-based Course Selection Program," under the direction of Murray Tondow. Plans include expanding dialogue regarding vocational choices for noncollege-bound students; developing and implementing in-service training programs for all grades in one junior high school; and analyzing the psychological effects of the program on students, parents, and staff and on the operating system of the schools (Minor, 1967).

Man-Machine Counseling System — Los Angeles

In this plan, developed by Systems Development Corporation and described by Cogswell (1966), the computer is used in a large junior and senior high school in Los Angeles to handle major information-processing tasks. The plans include storage of all student data for easy processing and retrieval; the tracking of students through their school progress to identify counseling problems; the automated generation and application of multiple prediction formulas; the automated scheduling and generation of reports; and automatic interviews to help students in course programming, post-high school educational planning, and vocational exploration. Machines were installed in 1967, with the system to be subsequently developed, implemented, and evaluated.

In the Los Angeles project, attempts have been made to relegate to the machine those tasks which can better be done by machine (acquiring, recording, reporting, searching, processing, and transmitting information), thus freeing the counselor to facilitate growth and awareness in students. Perhaps this kind of man-machine division of responsibilities is what Murray Tondow had in mind when he said that 90% of what is done in educational-vocational counseling might be done by a computer (1965).

Concern for the personal and human element in the thinking of the project designers is evident in their employing a group process consultant to get the technicians, researchers, and counselors together in developing the system and to strengthen counselor skills in the human aspects of their work (Cogswell, 1966). Despite the fact that the computer interview ends with, "It's been nice interacting with you," it is unlikely that the man-machine interaction will ever completely replace the more human man-man relationship of the counseling interview.

Career Decision-Making — Palo Alto

Already partially described in chapter 2, this California-based project is one of several lines of career development research going on in the Palo Alto area. The experience tables described earlier were developed through a cooperative computer research program with Cogswell at the Systems Development Corporation, Santa Monica. Making heavy use of prediction and probability data produced through computer analysis, the project has thus far focused more on educational rather than vocational information. Utilizing the booklet *Invitation to Decision* (Yabroff, 1966), the system encourages students to look at such dimensions of decision-making as the probable, the possible, the desirable, and the consequences of alternatives.

Follett Counseling Information Service (FCIS)

Developed by Instructional Systems Corporation (1967a) in conjunction with the Follett Publishing Company, the system is a commercial service developed to give ninth or tenth graders broad, comprehensive, individualized information for making educational-vocational decisions. Utilizing local data translated by computer into experience tables, the "Systems Approach to Group Guidance" is intended to help students in decision-making skills and in school course choice, to involve parents in the counseling process, and to maximize the effectiveness of counselor time utilization through a computer-based group guidance program. The counselor works with a Follett Information Services specialist in planning the system for his particular school.

The program is based on a decision-making framework such as that used in the Palo Alto research project. It relates the actual experiences of pupils to ninth-grade GPA. In support of this use of data by pupils, the manual cites Yabroff's study, which indicated that students who were given local experience data accompanied by audiovisual materials scored significantly higher in the following areas as compared with students who received only general or no information: 1) knowledge about the process of decision-making, 2) awareness of high school and college alternatives, and 3) knowledge of the probabilities involved in these alternatives (Instructional Systems Corp., 1967b).

Specific program objectives for students are: 1) to acquire understanding of the decision-making process and to develop the ability to use experience tables, 2) to learn of the experiences of former students like themselves and to be able to apply these to the decision-making process, 3) to plan a specific high school program using the information in *You, the Decision-Maker*, and 4) to understand the importance of using sound decision-making procedures and facts as a means of achieving goals.

Included in the Follett program are: 1) local data, 2) a semi-programmed student booklet called *You, the Decision-Maker*, 3) a parent's guide, 4) a computer-produced label showing GPA, 5) a manual for counselors, 6) an overhead projection transparency kit, and 7) in-service training and consulting. Since the service is fairly costly, it is probably of most use to larger school systems. It was pilot-tested in high schools in San Mateo and Ojai, California, and Tacoma, Washington. Related efforts have been under way for several years in the Palo Alto and other school districts.

Computer-Assisted Occupational Guidance (CAOG) — Pennsylvania State University

This system was created to meet the need for helping young people gain an understanding of the world of work and their place in it. A new storage and retrieval system for occupational information, the system is designed to be a working counseling tool for the dissemination of occupational information. Under the direction of Impellitteri (1968) at Pennsylvania State University, 100 occupational descriptions and slide presentations have been developed.

The system has tried to individualize the presentation of occupational information with support from the Pennsylvania Department of Public Instruction. At present it is a prototype for a more detailed system to be developed later. Thus far it includes only a limited number of occupational groupings and specific trade and industrial job descriptions for presentation to high school freshmen (Impellitteri, 1967).

The computer stores information about selected occupations abstracted from government and commercial publications, a GATB profile, and a student preference profile. Information is presented to ninth graders via typewriter printout, tape recordings (two-minute interviews with workers), and slide projections showing the worker in his environment performing typical tasks. An IBM 1050 computer terminal is the focus of student interaction. The system is seen as a complement to, rather than a substitute for, the counselor, to handle information aspects of vocational guidance which he is less able to handle.

The computer components include: 1) a typewriter, to provide a record of pertinent information that the student may take with him; 2) a tape recorder, to introduce a more personal kind of narrative orienting the student to the system and its purposes, to more nearly simulate the counseling situation, to provide job information in a more attractive manner, and to present sounds of work and voices of workers (Impellitteri, 1967); and 3) a slide projector, to present the worker performing tasks in the job situation, to present occupational outlook information, and to present blueprints and other pertinent diagrams.

Impellitteri suggests that the advantages of the system are in its flexibility and storage capacity. The flexibility allows for numerous changes and updating; the storage capacity allows for job descriptions as well as student profiles. In addition, the presentation of information in relation to aptitudes and interests makes the information more meaningful. It is hoped that the result will be the choosing of a vocational goal with a realistic appraisal of training and education required. It is possible that school use of the system could be organized statewide.

The program has been tried out at Keith Junior High School in Altoona, Pennsylvania, with 75 vocationally-oriented ninth-grade boys. The boys liked the printout but were not too excited about the slides and tapes. They preferred one-and-one-half-hour sessions at the terminal to the 40 minutes allowed. The program was revised and tested with 150 ninth-grade boys at Roosevelt Junior High School in Altoona, Pennsylvania, during the 1967–68 school year (Minor, 1967).

After a year of study, it was concluded that the system was a feasible one in assisting youth to explore occupational opportunities but that it did not help them in relating aptitudes and interests to occupations or in developing a framework of the occupational structure.

Computer Assisted Vocational Information System (CVIS) — Willowbrook High School, Villa Park, Illinois

An automated program of occupational information has been created in a project at Villa Park, Illinois. The project, described by Project Director Jo Ann Harris (1967), is designed to use computer technology for systematizing, retrieving, and applying large amounts of information in ways meaningful to students and counselors. It was developed as a means to meet the many informational and motivational problems connected with vocational choice.

The major goals of the project were:

1) to present to students expanded horizons of occupational possibilities;
2) to teach students valid methods of making decisions about vocational choices;
3) to aid students to choose out of a vast number of possibilities those areas which best fit their interests and abilities;
4) to do the above in a unique way which will capture and hold student attention by developing personal involvement;
5) to make occupational information, including training opportunities, readily available to counseling and teaching staff;
6) to provide research data on factors involved in vocational decisions and job satisfaction; and
7) to provide information about the range of local job opportunities (Harris, 1967).

Students are to be introduced to CVIS in the sophomore year English vocational unit. Each student will be invited to use the system voluntarily on an appointment basis. The student will interact with the computer at a terminal, which is a TV screen (cathode ray tube) and typewriter, and will receive information and answer the computer by typewriter.

The computer program utilizes grade point averages, test batteries, and the Kuder Vocational Preference Inventory, along with Roe's classification of levels of training and categories of interests. Several programs or scripts have been developed to assist the student in vocational exploration and self-analysis.

In his dialogue with the computer, the student is advised if his choice of a vocational classification level seems feasible, or if there seems to be a minor or major discrepancy between his choice and his interests and abilities. If a discrepancy exists, the computer advises him to see his counselor. The computer also prints a list of occupations suitable to the student's abilities and interests and gives a 50-word definition of the kind of work in each occupation. When the student has narrowed the field, he is given an occupational brief with a description of working conditions, salary, and occupational outlook. He may also discover vocational possibilities of which he had been unaware. The next step in this project is to program educational information to aid the student in choice of college, technical school, or job entry (Workshop, 1968).

Information about 400 occupations is stored in the system. The 50-word definitions and 250-word descriptions are to be abstracted by Doubleday from the new *Encyclopedia of Careers.* Plans for expansion and evaluation are in progress; new scripts are being developed in the areas of college selection, local community colleges, technical schools, entry jobs and apprenticeships, and Armed Forces vocational training.

Intellectual Growth and Vocational Development

The Educational Testing Service (ETS), with Thomas I. Hilton as chief investigator, has undertaken a five-year longitudinal study designed to: 1) trace the intellectual development of students who eventually choose vocational rather than college preparatory curricula; 2) investigate the interaction over a period of time of stated vocational plans, individual characteristics, environmental influences, and subsequent occupation; and 3) develop a preliminary theoretical model of vocational development. The project is making extensive use of data obtained from the Study of Academic Prediction and Growth, supported by both ETS and the College Entrance Examination Board (CEEB). Computer simulation techniques will be used to develop and test models of student vocational development. A variety of questionnaire data will supplement test data (Minor, 1967).

SCOPE — School to College: Opportunities for Post-Secondary Education

Under the sponsorship of the Center for the Study of Higher Education at the University of California and the College Entrance Examination Board, Project SCOPE is a longitudinal study of student decision-making and its outcomes. The six-year project, begun in the spring of 1966 under the direction of Dale Tillery, focuses on how high school students decide what they will do after graduation and what comes of their decisions. The aim is to discover decision-making patterns among high school students: the methods by which they acquire educational-vocational information; the nature and relative importance of parental, school, and community influences; and the times at which various stages in the decision process occur. The follow-up phase is an important part of the study.

The investigation began with the administration of questionnaires and measures of aptitude, interest, and personality to ninth- and twelfth-grade students in representative California, Illinois, Massachusetts, and North Carolina high schools. The seniors were tested again in the spring of 1967, and extensive testing was to continue in 1969 and 1970. Reports will be disseminated by the College Entrance Examination Board with statewide committees formed to help assure that the findings will affect the schools.

The data gathered include family and home milieu, parental expectations, self-evaluations, values, perceptions of school, information-seeking activities, occupational preferences, and intellectual predispositions (Tillery, 1969).

IMPLICATIONS FOR PRACTITIONERS

Elsewhere in this monograph it has been suggested that current practices have not kept pace with the advances of modern technology. Although many of the projects in computer-assisted guidance, multimedia, and simulation techniques are still in research, and theoretical rather than operational in form, there are several that are already being applied in the school or that could be adapted by an imaginative counselor. It is hoped that they may generate other creative projects which attempt to meet the career guidance and occupational information needs of young people better. One must, however, be aware of both the problems and potentialities in determining the implications of these innovations for the school setting.

Problems

It is abundantly clear that the projects described above are the products of man's creative capacity and imagination in harnessing advanced technology for use in solving educational problems; in this instance, problems related to vocational guidance. Although computer-assisted approaches are in the very beginning experimental stages, the promise seems bright. Recognizing that there are many as-yet-unrealized possibilities for utilizing the capabilities of the computer and other advanced multimedia, what are some limitations or anticipated problems?

One of the first is the concern about the depersonalization of the counseling process. While most counselors are not likely to become systems administrators, technicians, or computer programmers, either by predilection or by training, it is possible that the transition phase to machine systems will take the counselor away from personal contact with students. Although the emphasis is on the machine, it is man who has to talk to the machine, and it is probably the counselor who is in the best position to know what kinds of computer routines or multimedia might best supplement his work. Those involved in computer-assisted counseling projects repeatedly assert their concern for the human aspects. Yet, the fact remains that if computers take over part of the counseling function, there is likely to be less frequent direct contact with the counselor. While the student may get more information from his session with the College Viewdeck or ASK, for example, there may be some loss of the informal personal contact that sometimes accompanies a simple information-seeking request.

Another concern is the danger of losing sight of ends and means in the gimmickry of games and machines. Perhaps the dangers will be averted if counselors start with the needs of students and then create, or utilize, the hardware, the game strategies, or the simulation techniques as aids or tools in meeting those needs. As Tiedeman (1965) suggests, it is necessary to focus on guidance goals, keeping in mind that computers and other media are facilitators of those goals. Because of the intrinsic fascination of simulation games and computer approaches, practitioners need to constantly evaluate whether these tools are truly helping in the task of providing more effective services to students.

A third concern in utilizing such systems is the question of which aspects of a counselor's work can best be handled by man-man (counselor-client) systems and which by man-machine. The machine still depends on man for direction and control. While it seems apparent that certain functions of storage and retrieval can better be dealt with by machine and *may* save counselor time, the question needs to be asked as to whether such systems as Autocoun or other computer dialogues provide more effective ways of helping students in their planning and self-understanding than the personal relationships of individual or group counseling.

A fourth and perhaps most important concern is one of ends and means. Too often the approach has been one of adapting vocational guidance programs to fit the computer rather than asking the more vital questions such as: What are the goals of vocational guidance and how can computer systems be built to meet them? How can such systems be bent to meet the basic commitment of helping students with their developmental problems?

Finally, a not unreal problem for most school systems is the cost of implementing such machine systems once they are adjudged desirable. Most small schools cannot afford the costs involved in computer technology or highly complex media; hence, the need for consolidated efforts on state, regional, and national levels both to reduce costs and to avoid the duplication of efforts. In a recent issue of *The School Counselor* "Mr. 1307," a computer added to a school counseling staff, satirically points out many pitfalls which may ensue if computer technology is regarded as a panacea for the problems of counselor load and function (McGrail, 1967).

Potentialities

With these cautions in mind, the potentialities of advanced technology for improved career guidance need to be considered. There is no question that such artifacts of the technological age as computers, video tapes, and simulation strategies have tremendous motivational possibilities for student growth and learning. Counseling, as a part of education, is changing, and needs to take advantage of scientific, educational, and technological developments which might facilitate better counselor function and fulfillment. Computer technology and school-wide information systems may help educators to implement the team concept, since these systems require the cooperative efforts of all school personnel. It is entirely possible that if the computer can be employed to store and retrieve occupational-educational and student data, a more accurate, comprehensive, interesting, and accessible system will exist, and the counselor's information-seeking activities (such as visiting college campuses) and disseminating activities (such as repeating test requirements, post-high school options, and the like) may be replaced by more meaningful, genuine, and helpful counseling encounters.

The schools are ready, the needs are evident, and the technology exists. Perhaps it would be appropriate to conclude with further questions which should be posed before embarking on a guidance information system which utilizes advanced technology and media:

1) For whom is the system intended? Counselors? Students? Teachers? Administrators? Parents? All? Who are the potential users? Whose needs are to be served? (Walz, 1967).
2) Which instructional or counseling and guidance functions can better be performed by a machine? In which aspects of teaching, of counseling, of consultation, of appraisal, and of research and follow-up could

the machine facilitate the school's program of, and work in, career guidance?

3) What impact is the machine system likely to have, not only on the counselor's role but also on the counseling relationship? What is likely to happen to confidentiality? What limits need to be placed on the types of student data fed into the system and on those who have access to it?
4) Which approaches or devices or media can help the schools do a better job of guiding youth in their career development than has been done in the past? In other words, in what ways will services to students improve as a result of the system?
5) In the counseling and guidance of youth, what can be accomplished more effectively, ethically, economically, and professionally with advanced technology?

The schools are in a unique position to help students explore their potentialities. A creative counselor can be a key person in developing a systematic school-wide career guidance program. He is one who can help the school select and utilize the best and most appropriate aspects, products, and techniques of modern technology to facilitate student growth. As the person most directly involved in helping students toward vocational maturity and self-fulfillment, he has an obligation to help them identify the information they need, obtain the best and most reliable information through man and/or machine to meet those needs, and use and understand the implications of that information in their own career development. It would seem that these are some of the basic implications for the utilization of advanced media and technology in career guidance.

Summary

This chapter has presented a variety of systems and multimedia approaches to vocational guidance. Most of the projects cited involve computer-assisted guidance or a computer storage and retrieval system with direct student or counselor interaction with the machine. Some of the projects are funded research programs still in the planning, rather than implementation, phase. A good many of them involve cooperation between schools, colleges and universities, and private industry.

Other projects focus on the development and use of a variety of communications media in the dissemination of occupational information. Still others demonstrate gaming or simulation techniques as a new approach to vocational guidance and occupational information dissemination. The chapter ends with a consideration of implications of advanced media and technology for the practitioner in the school setting. Both the limitations and the potentialities are pointed out.

Chapter V

GUIDANCE AND VOCATIONAL EDUCATION

As one examines the literature on vocational guidance and occupational information and becomes aware of the attempts to do something about improving career guidance, it seems apparent that a number of guidance people are collaborating with vocational educators to close the gap between the two fields.

Many counselor educators and vocational educators are trying to improve relationships between vocational education and guidance. Mutual misperceptions need to be examined and discussed and the air cleared before counselors and vocational subject teachers can create a climate of cooperation and trust. Ginzberg (1967) suggests some key questions which must be answered, one of which asks what kinds of research need to be done related to counseling and guidance. Also needed is a clarification of the relationship between vocational or technical learning and general education. The nature of the guidance and selection processes and the flow of students into and out of programs are examples of the kinds of problems involved in the redefinition and reconceptualization of vocational-technical education (Rosenberg, 1967).

The mutual challenges of vocational education to guidance (Hoyt, 1966) and of guidance to vocational education (Hoyt, 1965) have been dealt with in the literature and suggest it is time that both school counselors and vocational educators take a hard look at themselves and each other. Such examination should be directed to the needs of those to be served by vocational education and should be based on 1) the increasing anxiety about the uncertainty of the future due to rapid technological change, 2) the increasing recognition of the demand for skills and utilization of skills at higher levels of competence, and 3) the increasing recognition of the multiple opportunities for choice facing each individual.

In spite of their differences, guidance and vocational education have been inextricably linked for many years, particularly since guidance started in state departments of vocational education with the creation of the state supervisor of guidance. Although vocational education has been one of the greatest supporters of guidance, there are several ways in which vocational education and guidance misunderstand each other. Among expectations vocational educators have of counselors are:

1) They expect counselors to support the concept of the key role of vocational education in society (and of the concomitant need for skill training facing both youth and adults).
2) They expect counselors to help vocational education courses to be viewed as positively as any other part of the school curriculum.
3) They expect counselors to have substantive knowledge of vocational education and the occupations for which vocational educators prepare workers.
4) They expect counselors to regard educational-vocational counseling as one of their primary duties and responsibilities.
5) They expect counselors to be competent in performing the educational-vocational guidance functions with present and prospective students of vocational education.
6) They expect counselors to be interested in, and concerned about, present and prospective students in vocational education (Hoyt, 1966).

These expectations have not been met, notably because of the disproportionate time counselors spend working with the college-bound, the status given to college attendance by society, the lack of adequate counselor preparation, and the need for strengthening the nature and quality of vocational offerings themselves. It has also been charged that "the truly significant role of vocational education, as a part of American education, has never been understood operationally by the majority of teachers or administrators or counselors in our schools." It is often charged that while 80% of those who go on to college do not finish, most of the time and effort of school counselors has been spent with the college-bound. Another concern of vocational educators is that vocational education is a "dumping ground" for students who could not succeed in the regular academic program. The more positive perception of vocational education as a response to a demand for diversified curricula to meet individual difference has not been understood (Hoyt, 1969).

On the other hand, vocational education, despite its financial support of guidance, has not always understood guidance from the counselor's frame of reference, including such ideas as:

1) the central importance of *choice* in the thinking of guidance personnel;
2) the concern of counselors with the development and utilization of talent to "produce maximum benefit to society and maximal personal satisfaction to the individual";
3) the concern of counselors about the adaptability function of secondary

education, preparing youth for the certainty of uncertainty facing them in times of rapid change;

4) the breadth of opportunities from which young people can choose;
5) understandings regarding the unity of guidance: that vocational education is a part of, not apart from, the rest of education, and that funds for guidance support the total guidance system and not a separate guidance system for vocational education (Hoyt, 1965).

To meet the challenges, several writers have suggested the imperative need for dialogue between counselors and vocational educators. For guidance people, there is a need for 1) intensive examination of motivations and action, 2) amassing new knowledge and appraisal instruments for use with vocational education students, 3) teaching of this new knowledge to counselors in training, and 4) striving to increase the number of counselors in the country.

Vocational education has been either a precursor of, or a partner with, guidance in sponsoring a number of conferences designed to deal with many of the topics outlined in this monograph. The Vocational Education Act of 1963 (and its 1968 Amendments) has lent much impetus to efforts to improve communication between vocational education and vocational guidance.

Described below are some promising programs and practices which seem to embody the guidance point of view with its emphasis on the individual and his needs. Several of the illustrative programs reflect interdisciplinary approaches to learning, attention to the disadvantaged, community involvement, practical exploratory programs, and potential new roles for counselors.

Area Concept

All over America school personnel and community leaders are increasingly realizing the need for more and better vocational-technical training for employment-bound youth, school dropouts, and adults who must learn new skills to compete in the changing job market (Patterns for Progress, 1967). One of the ways in which their needs are being met is through area vocational-technical schools. Among the advantages cited for the area concept are:

1) several school districts can cooperate to jointly provide vocational-technical training;
2) students in the high school program can retain their identity with their own high school, acquire their general education and graduate from their home high school;
3) admissions and financial structure can be developed on a wide basis;
4) a wide range of courses can be made available (Michigan, 1966).

The state of Georgia is one of several which have actively promoted area vocational-technical schools. Under the leadership of William Hicks, State Supervisor of Trade and Industrial Education, Georgia has developed a network of postsecondary schools geared to meet the demands of modern industry. After carefully planning and executing his strategies of change through extensive state tours and talks, Mr. Hicks made a formal proposal to the legislature. It was quickly passed, with the result that 18 area vocational-technical schools were established around the state.

The Coosa Valley Area Vocational and Technical School is a good prototype of this rapidly spreading kind of education. A survey of local industry was made to determine the kind of training needed; advisory committees were organized; the assistance of labor, business, and workers was enlisted; and curricula were created.

Gene Bottoms, associate director for vocational education, points out that many of the students who enroll in the schools have short-range rather than long-range goals. "Whatever they want, they want it in a hurry," and they may be the ones who start but do not finish the area vocational school programs (McDowell, 1966). Although they may not all finish, students find that even a little training makes a big difference. In fact, premature enticement to jobs is a problem which vocational schools and employers are working on together. Employers are also discovering that the area schools can upgrade the skills of present employees. One characteristic of the Georgia plan has been close cooperation with industries such as Western Electric and Lockheed. One of the real breakthroughs reported occurred when Lockheed and its unions agreed to bring the area school into the instructional phases of their apprenticeship program. The Lockheed instructors use the area school facilities, and several are on the vocational school advisory committees.

Although all of the 18 schools are primarily postsecondary, several recent experiments mix postsecondary students with high school seniors who take technical electives at the area school but get their diplomas from their high school. The next stage calls for opening a network of area vocational high schools with three hours per day of regular academic subjects and three of vocational courses in such areas as auto mechanics, machine shop practice, heating and air conditioning, radio and television, and sheet metal (McDowell, 1966).

Federal Programs

Much federal legislation passed in the last few years has been geared to the education and training of the employment-bound, the culturally deprived, the adults needing retraining, the dropouts, and the hard-core unemployables. A number of research and pilot projects are geared to the needs of the employment-bound or economically disadvantaged youth. The newly created

Neighborhood Youth Corps, Job Corps, Opportunities Industrialization Centers, and Work Opportunity Centers are all examples of federally funded special programs geared to more specific vocational education and skill development for both young people and adults. For those interested in greater detail on some of these acts, the implications for counseling have been described in *Career Planning and Development* (Morehead & Fuller, 1965).

Professional Organizations

Professional organizations for both guidance and vocational education have been involved in initiating and continuing the dialogue between the two groups. In addition to holding several conferences, the American Vocational Association devoted a special issue of its journal to the topic of "Guidance in Vocational Education" (1966), and has continued to feature guidance articles. The American Personnel and Guidance Association is encouraging the membership of vocational educators (Dugan, 1966), and AVA is encouraging the membership of counselors in its ranks (Burkett, 1967). The National Vocational Guidance Association has two commissions concerned with career development and its implementation through the curriculum. A commission jointly sponsored by NVGA, AVA, and the American School Counselor Association focuses on vocational guidance in vocational education. Along with these developments, the place of vocational education in the curriculum is being given new emphasis.

RICHMOND Pretechnical Program

Operating in 19 high schools in the San Francisco Bay area, the Richmond Plan attempts to overcome the usual subject-matter fragmentation by using the occupationally-oriented student's practical and occupational interests for developing, in an integrated program, his general and academic skills. Subtitled "One World of Science, Math, English, and Shop," the plan was developed by a group of teachers during summer planning sessions. It involves practical applications to practical projects and is based on the student's question, "Why do I have to learn this?"

In each of the 19 schools, about 60 students a year are involved in the "pretech" demonstration classes. Their IQs generally are in the 90–115 range, but school achievement is poor; about one-third had been expected to drop out before graduation. Of the 58 boys in one school, 20 of whom were considered potential dropouts, all but two graduated. Most of the students went on to higher technical education. Of 19 who took an achievement test to find out if they were ready for college level English, 17 passed (New Directions in Vocational Education, 1967).

The project received a small grant for teacher planning and initial tryout in an eleventh-grade class of two Richmond high schools. Intended as a program for "kids in the middle range," it soon caught the interest of some key mathematics teachers. The emphasis in math has been on problem-solving; in English, on communication. Field trips to laboratories, government experimental stations, and industrial plants are an important part of the pretech program.

The Richmond Plan has created different staff functions, too. The counselor has found that the teaching team has taken over many guidance functions. Teachers in the program have to be adaptable and dedicated because of the extra time needed for meeting and planning. There has been discussion of a teacher-training institute to prepare teachers for this kind of teaching. Meetings with parents are also being held to counteract the "college only" philosophy of many parents.

Evaluation of the project still poses many questions. One of the critical problems has been finding evidence that the program increases chances for success of students who were near failure.

The pretech program already has spread into the occupational area of mass food preparation under the title Project FEAST (Food Education and Service Technology). In Project FEAST, science, math, and English are geared to problems of mass food preparation. Male students comprise more than 75% of the enrollment. Business administration and commercial art are two other possible fields into which the integrated program may expand.

The Center for Technological Education at San Francisco State, which is involved in the demonstration phase of the project, has set up a counselor's task force to investigate problems in high school pretechnical educational programs which have implications for counseling; to design strategies to improve counseling in relation to interdisciplinary programs; and to study problems of articulation. The center is also developing in-service and pre-service teacher education programs (Miller, 1966).

Work and Study for Functional Living

The Market Street School, an attempt to save 150 high school students from the ranks of the hard-core unemployed, has proved to be a success story in Warren, Ohio. Housed in a special environment for occupational training, the six-year school combines an unorthodox academic program with practical work in the school shop and on a school-owned farm. The practical work leads to part-time employment in the junior and senior year for pay as well as for credit.

The Occupational Training Program, for less able students, is held in the Market street school. Despite initial prospects of failure, the school began without a published curriculum and without textbooks, but with a problem-solving emphasis. Students became very involved in remodeling the school farm. A work-study program was initiated, with jobs obtained in stores, restaurants, filling stations, machine shops, and hospitals. A savings program became part of the curriculum. Problems of insurance were discussed, with the problems of a volunteer former student used as a "case study." Other topics included bank interest, mortgages, and installment buying. The whole concept of education in the Warren program is based on "real life" or functional living (New directions in vocational education, 1967).

Realistic Training for "Families and Skills"

In line with new concepts of vocational education, this project highlights training for a "family" of skills rather than for a single skill. The key idea is possible job mobility as technological shifts change the employment picture.

A new concept in education — calling for highly flexible facilities with few walls, aisles instead of corridors, a materials resource center, individual study carrels, and interdisciplinary approaches — has been developing for several years in Quincy, Massachusetts. The project evolved out of concern about a report stating that only 20% of the high school graduates entered college with a serious commitment to finish, although the greatest efforts of the public schools were directed toward college education. A follow-up study found that fewer than 30% of the graduates were actually completing college (New directions in vocational education, 1967). However, in an enrollment of 1,700, only 300 were taking vocational courses.

An Educational Policies Committee was formed and came to the single conclusion that no student should leave secondary school without a salable skill. A local employment census was taken which indicated that about one-third of the high school population ought to be preparing for trade and industrial pursuits and a large number of specific service occupations for which there was a demand.

Under the initiative of Maurice Daly, assistant superintendent for vocational education, a proposal was drafted and resulted in a $625,000 U.S. Office of Education grant for five years. Project ABLE identified 11 broad vocational families: business education, computer data processing, electrical-electronics, food preparation, general piping, general woodworking, graphic and commercial arts, health occupations, home economics, metals and machines, and power mechanics.

The program, extending from grades 9 to 14, is a highly individualized one, in which a student undertakes the tasks of learning units at his own rate on a continuum of training. Thus, a program might be completed by the 10th grade or continue beyond high school to the 14th. Plans call for developing a junior high school level prevocational course for all students in "basic technology," a course which would start with simple, familiar things like batteries, thermostats, faucets, and light bulbs, and move toward theoretical knowledge and concepts. The course would include generalizable knowledge in six categories: mechanical, electrical, spatial, chemical-biological, symbolic, and people. If a student shows mental and physical dexterity for one area more than another after exploratory experiences, he may, by the time he is in seventh or tenth grade, have some confidence that he belongs in a given family of occupations. The Quincy approach is seen as a new approach to all education (New directions in vocational education, 1967).

The Specialty-Oriented Student

The Specialty-Oriented Student Project (SOS) is a research program initiated at the State University of Iowa under the leadership of Kenneth Hoyt. It is a program for the student "whose motivations toward educational achievement are built largely around a desire to acquire a specific occupational skill or set of skills. . . . He is more interested in being 'trained' than being 'educated' [Hoyt, 1963]."

Hoyt suggests that the needs of this type of student for guidance are increasing more rapidly than those of any other segment of the population (Hoyt & Griffith). The SOS program attempts to identify the characteristics of this student and has developed materials for 36 schools which offer training programs to such students. Hoyt and his associates have used a different format for the materials, basing them on the questions counselees ask, using enrollees in the specific schools for obtaining the information desired. They also have paid close attention to reading level and writing style (Hoyt, 1962).

Other Programs

Many other innovative programs could be cited:

— the Pittsburgh Occupational Vocational Training Program, designed to provide a new curriculum with skills-centered courses for 70% of the school population (Curriculum programs in action, 1967);

— the American Industry Project at Stout State, involving teachers in improving the industrial arts curriculum through more direct coordination with industry, knowledge of the structure of industry, and problem-solving related to industry (Curriculum programs in action, 1967);

— the Partnership Vocational Education Project at Central Michigan University, a new program in industrial-technical education designed to improve the quality of courses, articulation, and application which involves "partnership" of the high school, community college, and university with industry, Chamber of Commerce, and labor (Curriculum programs in action, 1967);

— the Anoka (Minnesota) School Habilitation Program at Anoka Area Vocational Technical School, in which students receiving training in the Work Adjustment Center are to be enrolled in a regular high school program on a half-day basis (Mangan, 1967);

— the Multi-Occupations Vocational Exploration Program for special needs of students at the Harkness Center of the Board of Cooperative Educational Services, Buffalo, New York (1968);

— the Penta County Joint Vocational School, which serves as a center at which students from five adjoining high schools can take vocational education programs but graduate from their own high school (Maumee High School).

All the above programs are functionally-oriented, providing a variety of exploratory work experiences for young people. What is not completely clear is the counselor's function in these programs. Nevertheless, while his new role is not fully delineated, many of these projects either force or encourage a closer working relationship. Often these take the form of a team approach between counselors and vocational teachers or vocational subjects. These practical approaches may help to form bridges to counseling by encouraging students to come in and talk about their experiences with a counselor. It may be that the counselor can be instrumental in opening the door to closer cooperation between various curricular areas within the school such as vocational education and social studies. The counselor is so situated that he may also forge closer working relationships between vocational education and such community agencies as the state employment office.

The tryout experiences in functional programs, the integrated efforts to combine occupational interests into practical learning situations, the special projects and schools created to meet certain occupational needs, the cooperative projects with industry — all these suggest that although much remains to be done in improving guidance services for the too-long-neglected vocational needs of all students, promising things are happening through the joint efforts of guidance workers and vocational educators. Continued and expanded cooperation of this nature is needed if the advances made thus far are to find their way into the schools and contribute to the career development and career guidance of youth. Further experimentation is also needed to determine ways in which counselors can function most effectively in relation to these programs, whether it be in an innovative, facilitative, team, or other capacity.

Summary

This chapter has pointed out some of the misconceptions between guidance and vocational education and has described illustrative programs which have attempted to bridge the gap and to provide exploratory, tryout, and developmental experiences for the technically-oriented or employment-bound student. The efforts of area vocational-technical schools, of federal programs, and of professional organizations to improve opportunities and working relationships are briefly described. A few unique vocational education projects which attempt to make education more realistic and functional are presented. The need for counselors and vocational educators to work more closely together to improve career guidance of youth is reaffirmed.

Chapter VI

NEEDS, CONCERNS, AND CHALLENGES

The needs of young people for effective vocational guidance are far from being met. It has yet to be demonstrated that career guidance practices and their main purveyors, school counselors and teachers, make a significant difference in the vocational development of youth. As heretofore indicated, there are some promising approaches in progress which are helping to bridge the gap between theory and practice and which seem to come closer to the goal of helping students more fully develop and utilize their potentialities. Some of these promising practices are summarized below.

First, newer concepts of career development are finding their way into the schools. Career guidance practices are being revised or modified or expanded to emphasize the continuous, tentative nature of career development rather than a single, final occupational choice. Developmental curricula, new career guidance units for elementary and secondary school, and team approaches to vocational guidance are in progress. Thus, efforts are being made to upgrade school practices at several levels and in several ways.

Second, there are numerous attempts to find new ways to bring students, counselors, and teachers closer to the world of work, and vice versa. The movement to get students and counselors out into the community and, conversely, to get businesses and industry into the school is forcing some flexibility into traditional time-bound and wall-bound programs. Leaders in business and industry are playing key roles in creating new programs and materials and in serving as resource people for career information for students. Industrial visits and work experience form a part of a number of school programs, particularly those for employment-bound students, and a few people recognize a need for direct observational tryout experiences for all. In-service workshops and institutes for counselors and teachers have multiplied in the last few years, evidence of industry's and education's increasing concern for getting occupational information to students and educators and for a partnership approach to improving vocational guidance practices.

Third, the advances of computer technology and media production have caused a great many school and community leaders to examine the implications of modern technology for computer-assisted guidance (Samler, 1966). A growing number of projects aimed at different aspects of career guidance range from utilizing computers for storage of student records and appaisal data, as in the Rochester Kodak Project, to student interactions with the computer, as in the Palo Alto Autocoun and Man-Machine Systems projects; from using the computer to program students in individualized instruction, as in *Project PLAN*, to storage and retrieval of automated occupational information, as in the San Diego, Villa Park, and Pennsylvania State University computerized vocational information projects.

Fourth, the concern about the inadequacy of much occupational information has led to the creation of a tremendous variety of new materials and media. Among the limitations cited in much of the literature are 1) an overemphasis on the professions, with insufficient emphasis on other groups of occupations; 2) too high a reading level for counselees; and 3) poor and unappealing writing style, format, and content. Hoyt has criticized occupational literature as focusing too much on the information provided by labor market experts, with too little attention focused on the questions counselees ask as they attempt to make career decisions (1966). To meet these criticisms, many multimedia approaches are being developed, including films, games, and a variety of audiovisual materials. Educators and commercial publishers are demonstrating an awareness of the need for finding more innovative, effective ways of preparing and presenting occupational information.

Fifth, a number of experiments are working toward better ways of disseminating occupational information. Often these go hand in hand with the efforts to create new materials. Examples of these are Project VIEW and the Regional Career Information Center in San Diego (Gerstein & Hoover, 1967) and the proposal for a model occupational information unit in New York (DuBato, 1967). Both of these projects utilize local employment and labor market information and seek student and counselor expression of their occupational information needs. The widespread development of audio tapes, video tapes, film loops, phonograph records, filmstrips, student newsletters, parent pamphlets, teachers' guides, games, programmed machines, and major research projects for preparation of materials indicates that there is much action in this area.

Sixth, the existence of a number of industry- and community-sponsored programs, particularly for in-service counselors, suggests that there is some awareness of the need for improving counselor background in career development and information. The opportunities for counselors to be employed by industry in summer programs and to attend workshops and institutes, such as those sponsored by Dunwoody Institute (1966), General Electric (1967), and the University of Minnesota Pilot Projects for Distributive Education Teachers and Counselors (Tennyson & Meyer, 1967), indicate real concern for better preparation of counselors and teachers to deal with occupational information and career development.

In spite of these promising attempts to meet the challenge of improving career guidance, there are still unmet needs. These needs, discussed in the pages which follow, include 1) conceptualization of career guidance for new school organization, 2) greater emphasis on career guidance in the preparation of teachers and counselors, and 3) improving public attitudes toward career guidance.

CAREER GUIDANCE AND NEW SCHOOL ORGANIZATION

Flexible Modular Scheduling

One of the areas of imminent need is creative thinking about career guidance in schools which are involved in new types of curricula and school organization and structure. Various forms of flexible modular scheduling, which remove the typical one-hour-per-day, five-days-per-week programming, seem to be the approach used most often in schools which are innovating. While flexible modular scheduling may not be the ultimate answer in school organization, it does seem to offer possibilities for integrating career guidance activities more directly into the curriculum. There does not seem to be a great deal of conceptualization as yet about the form that counseling and guidance will take in the more flexible school programs and structures, although the need for such new thinking has been recognized in the counseling field.

In a few schools where flexible scheduling has been adopted, or where there is a more open, fluid kind of school day, counselors are finding new roles and functions. Time for guidance activities is built into the school day as part of the ongoing program. With unscheduled modules built into a student's day, more blocks of time are available for group guidance and counseling, and students are more accessible for such activities. In certain new schools, counselors are being asked to serve as consultants in various kinds of human relations programs in which faculty and students are participating (Anderson & Johnson, 1968).

Interdisciplinary Approaches

In schools in which interdisciplinary teams are operational, the counselor may function in ways quite different from more traditional programs. He may find himself out of his office and in the classroom, helping to plan, teach, and evaluate experiences, particularly as they affect individual student development. He may find himself working more closely in liaison with the curriculum, going on field trips, sitting in on departmental and team planning meetings, offering suggestions as to ways in which vocational aspects enter or could enter into the subject or team teaching areas. He may be a chief source of materials which teachers use to talk about careers in relation to subjects, not only during National Vocational Guidance Week, but during the entire school year. He may assist in departmental evaluation and testing. Indeed, he may make a major contribution to student career development through working more closely with teachers and the curriculum and becoming an integral part of the teaching-learning process.

Vocational Aspects of Guidance

The vocational aspects of guidance which will need to be considered in relation to new school organization include:

1) clarification of the respective roles of teacher and counselor in performing guidance functions;
2) integration of occupational information into the various subject specialties which still exist;
3) development and implementation of sequential exploratory experiences and exposures;
4) design, location, and staffing of a career information and counseling center or a central learning resources center, where multimedia materials in guidance and career planning can be housed and used;
5) new uses of groups and new approaches to group procedures in guidance, as both students and time are made available;
6) team development of a school-wide information system which identifies and provides for instructional, administrative, and guidance inputs;
7) better integration of occupational information into counseling, including a balance between occupational and educational information;
8) implications of studies on reinforcement of information-seeking behavior for vocational counseling; (Krumboltz & Thoresen, 1964)
9) ways of involving paraprofessionals in the career guidance programs.

Changes in Occupational Information

With the changes in school structure, better ways will need to be found to prepare, house, and disseminate occupational information and to use such information in counseling. Hopke predicts several significant changes in the use of occupational information in the future:

1) a greater demand for occupational information geared to the needs of women, the culturally disadvantaged, and minority groups;
2) a better balance between information for these groups and information which emphasizes professions and white collar occupations;
3) the availability of printed information for reading levels from kindergarten to college;
4) more use made of occupational literature at all grade levels, in the curriculum as well as in individual counseling;
5) data-processing and audiovisual equipment making possible push-button storage, dissemination, and retrieval of information from learning centers for individual or group use;
6) a better balance of psycho-social and economic information;
7) increased efforts of an interdisciplinary nature to bring the results of related research to bear on the production of occupational materials;
8) with shorter working hours and days, earlier retirement, and greater longevity, a need for more information on the world of "non-work": hobbies, leisure-time activities, part-time and volunteer work, military information, and educational opportunities;
9) more frequent revision to keep occupational information current;
10) demands for local materials met by an increased production of information by states and areas within states;
11) increased emphasis on families of jobs or occupations by industries rather than on individual occupations; and
12) more information on local and area training opportunities for students as well as adults who have dropped out or wish to continue (Hopke, 1966).

Curriculum Change

Perhaps the most basic need in the new school structure is curriculum change which is a "wave rather than a ripple." Allen has stated, "You do not have real curriculum change by frittering away at the periphery of the curriculum: real change does not come without change in school organization and structure [1968]." The possibilities for building systematic career guidance into the school curriculum should be enhanced as 1) teachers become more accustomed to fluidity and flexibility; 2) students become more available for and aware of occupational information and career planning opportunities; and 3) counselors work more closely with teachers to alert them to vocational implications of subjects, team teach guidance-related units, and serve as a resource for ideas and materials. Individual exploration, individualized instruction, and opportunities for counseling available in such programs as "Educational Systems for the Seventies" provide a good prototype (ES

'70 News, 1968). An examination of this nationwide effort to effect real curriculum change may serve to illustrate possible counselor roles.

Educational Systems for the '70s

The attempt of 17 participating schools in the nationally-coordinated ES '70 to relate education to the needs of American youth deserves the attention of educators interested in improving not only education but career guidance. The participating schools from 14 states in all parts of the country plan, through unique local-state-federal cooperation, to establish an innovative, organic curriculum tailored to fit the needs of youth in the particular secondary school district each serves. Now in its third year, ES '70 has encouraged many of the key ideas discussed in these pages: team planning, close alliance with the world of work through involvement of business and industry, flexibility of curriculum and schedule, educational laboratories and learning resource centers, integration of subject matter based on learning objectives, and utilization of information technology by students, teachers, and administrators. Of special interest to counseling is the emphasis on developing a comprehensive curriculum and organization relevant to adult roles each student will play, "an instructional program that leads to relevant career orientation." [ES '70 News, May, 1968] In fact, one of the five main categories of the ES '70 "program is called "Instructional Manpower and Career Guidance."

While the program thus far has been in a conceptual rather than operational phase, the various school districts involved are undertaking diverse enabling activities in such areas as staff development, facilities planning, definition of performance objectives, and development of instructional models. A major concern of the project is computer applications to instruction and guidance and the appropriate technology to implement such applications. The attempt to reorganize the high school curriculum in a process-object model for the integration of objectives "is an attempt to structure learning experiences in a manner more consistent with their application to the tasks of life than the present subject matter breakdown." [ES '70 News, June, 1968]

New Counselor Functions

As the ES '70 program evolves, the counseling tasks should become clearer. The expectation is that the increased use of technology will create more opportunity for strong interpersonal relationships and realization of human values and that "students will have rapid access to an information bank to help them make intelligent choices in career goals, in choosing instructional modules, in identifying their own skills and needs, and in planning their schedule of activities." [ES '70 News, June, 1968]

The official project newsletters published thus far speak of student-teacher-administrator roles, but contain little on the counselor's function in this new system. Yet, the goals of the new kind of educational program reflect the language of guidance: "the active development, the positive achievement and self-direction of students." [ES '70 News, June, 1968]

How the counselor will relate to this learner-centered curriculum has yet to be delineated. It would seem that the counselor's involvement at all developmental levels — in identifying student needs, in designing performance objectives, in evaluation, and in information system development — could be a significant contribution to educational systems in the process of social change. Moreover, in addition to the refining of educational objectives based on traditional subject disciplines, it would seem that counseling and guidance could seek to assure that recently-identified career development objectives, which have not been a part of the traditional school curriculum, be considered in the integrative process envisioned in the system. It may be that the student-teacher contract being used in some of the ES '70 schools could also crystallize into a counselor-student contract. Depending on his skill, training, creativity, and professional interests, the counselor could be of assistance in planning and facilitating some of the "world of work" community liaison projects; in developing a career guidance curriculum appropriate to his particular population and community; in identifying the elements of counseling and guidance which can be built into the information system; and, depending on his creativity, devising "mode-media mixes" which will assist in implementing the new organic curriculum. While these may suggest a major shift in function for the counselor, they seem to be congruent with new conceptions of education and counseling. They are only a sampling of what might be done in trying to meet better the needs of youth in new forms of school organization and structure and basic curriculum change.

CAREER GUIDANCE, TEACHER PREPARATION, AND COUNSELOR EDUCATION

Although a variety of opportunities exists for interested teachers and counselors to update themselves through in-service programs sponsored by universities, industries, trade schools, and local civic organizations, there is need for a more systematic approach to both the in-service and pre-service training of those who are involved in the guidance of youth. The Oakland (Michigan) Project (Green, 1965) notes that while counselors obtained occupational information from a variety of sources, the chief direct source was an occupational information course required in their counselor preparation.

Counselor Preparation for Vocational Guidance

The Missouri (Gysberg & Joslin, 1967) and George Washington University (McDaniels, 1965) conferences addressed themselves to the question of counselor preparation for vocational guidance. The College Entrance Examination Board conference (1967) dealt with counselor preparation for educational guidance. All three conferences concluded that additional preparation of counselors for vocational guidance is needed. One reason given was that the world of work is rapidly changing. Another reason is that career development was not taught at the time many counselors were trained. The current view of vocational guidance and career development as part of the total school curriculum, as delineated in the Airlie House conference (NVGA, 1965), is also a new concept to which most counselors prepared in the 1950s were not exposed.

Review and re-evaluation of the vocational input of present counselor education programs would seem to be a necessary prerequisite to changes. This might include not only an examination of where and how vocational guidance emphases exist, but also revision of the courses offered. In addition to offering courses in career development theory and updating these courses, it would seem desirable to acquaint prospective counselors with the new media for presenting career information and to give them some understanding of potential utilization of computers in guidance. Ways of integrating vocational counseling and occupational information into practicum experience also need to be explored.

Preparation in Curriculum

If the counselor is going to work more closely with teachers and the curriculum in implementing vocational guidance, he will need to add courses in social psychology, group processes, and curriculum to his program. If not through courses, other ways need to be found for him to learn more about curriculum trends and developments, the school as a social organization, and teachers' needs. The human relations laboratories and sensitivity training programs in which both counselors and teachers are involved in some of the new schools provide one approach (Anderson & Johnson, 1968). The assignment of counselors to work not only with individual students but also directly with curricular areas or with teaching teams is another approach.

Action Programs

Some changes of this nature are already occurring. Gysbers (1968) reports that as a result of the Missouri conference many counselor educators are revising courses and practices. Because they felt a "need to increase the emphasis on vocational aspects of guidance in pre-service and in-service training programs," they have initiated the following action programs:

1) Approximately one-half of the 70 participants indicated that some form of revision has occurred in their counselor education curricula. On one campus, for example, the Occupational-Educational Information Course is being offered only in one-half-day blocks to allow students to visit businesses and industries and related community agencies. Classroom instruction will try to integrate field work. Another participant reports the creation of a course entitled "Developing and Implementing an Organized Guidance Program in a Comprehensive High School."
2) A number of seminars and institutes for practicing counselors have evolved, including one for 50 high school counselors entitled "Developing Model Exploratory Experiences at the Junior High School Level and Model Job Placement Programs for Students at Whatever Point They Leave High School." Another seminar is directed to "Increasing Vocational Counseling Competencies of Secondary School Counselors." Some of these require close cooperation with workers in vocational education, state employment offices, and industry.
3) "Instructional Systems for Integrating Vocational Guidance with Instruction," a proposed project, will be devoted to:
    a) the development of experimental occupationally-related instructional systems for use by social studies, English, and mathematics teachers;
    b) the development of teaching strategies and procedures for use in units;
    c) field testing in pilot schools;
    d) demonstration of these systems in cooperation with appropriate agencies.

Odgers (1968) also reports a number of action programs to improve vocational guidance preparation of counselors as a result of the National Seminar on Vocational Guidance at Northern Michigan University. His follow-up study found that as a result of the seminar 37 states had scheduled workshops, conferences, or other in-service education; 18 had conducted summer counselor-education institutions or seminars; and 6 had initiated improvements in pre-service counselor education programs. These are merely illustrative of the kinds of action that can be generated when those involved in the preparation of counselors rise to the challenge of self-examination to improve vocational guidance services to youth.

Teacher Preparation for Vocational Guidance

The concomitant question of preparation of teachers for vocational guidance is equally important. At present, few teachers are involved, except for those who teach occupations units. The Sanstead study found that teachers of the occupations unit in Minnesota junior high schools felt very inadequately prepared to deal with it. Nevertheless, upwards of 90 percent of the teachers felt that students need and can benefit from such a unit, even though taught in a far from ideal form, and that it was at least as interesting as, or more interesting than, the remainder of their course (Sanstead, 1966). One constructive project to help meet the teacher's need for background in this area is the NVGA publication *The Teacher's Role in Career Development* (Tennyson, et al 1965).

Teacher Training Curricula

Social studies teachers, the teachers most frequently involved with teaching the occupations unit, expressed a need for a much greater concentration on occupational information during their undergraduate training. If occupational planning units, usually taught at ninth- and twelfth-grade levels, are going to continue as part of the social studies curriculum, the mandate seems clear to the teacher training institutions to provide background and training in career development, occupational information, and vocational guidance. However, as presently constituted, teacher training curricula allow little room for attention to these kinds of concerns. The heavy emphasis on subject matter and methods, the tendency to demean professional education courses in favor of the disciplines, and the competition of the various education departments (foundations, psychology of learning, statistics and measurement, history and philosophy of education, etc.) for a segment of the teacher education curriculum make it highly unlikely that already-crowded undergraduate programs will make room for courses in career development, occupational information, or both. Thus, it would seem that, in spite of the need, other ways may have to be found to include career guidance as part of teacher education unless teacher education institutions develop new training models which include these kinds of learnings. It would seem that a dialogue needs to be initiated between counselor educators and teacher educators to explore the needs further.

Interdisciplinary Models in Higher Education

Perhaps a partial answer is that suggested by a model for summer institutes, developed jointly by the distributive education and counselor education departments at the University of Minnesota, in which 20 counselors and 20 distributive education teachers were selected to participate in a six-week training course focusing on career development and occupational experience. Participants worked together in small groups, at a retreat and in the classroom, trying to identify behavioral objectives in career development and creating learning experiences to meet these objectives (Tennyson & Meyer, 1967). Although this was a program for in-service teachers and counselors, it would seem to hold promise as one means of bringing counselors and teachers together to create a better understanding of each other's role and to recognize mutual concerns. The joint counselor-administrator-teacher workshop at Case Western Reserve, described in chapter 3, offers another promising model. If such workshops could be held for counselors and teachers of English, social studies, modern languages, industrial arts, and home economics, among others, some of the above concerns might well be met.

Opening Communication Channels

The desirability of opening the communication channels between counselors and teachers seems unequivocal. In addition to special training programs, dialogue initiated through professional organizations offers another possibility. If counselors can be invited to talk with teachers of foreign languages, social studies, English, and other subjects, and a reciprocal invitation can be extended to teachers to talk with counselors at professional meetings, perhaps some of the barriers can be reduced. Even more important, communication channels need to be opened within each school setting. As the counselor moves out of his office and gets out into the community, perhaps he can establish a closer relationship with teachers and with the curriculum. An approach being tried in one school is to assign each counselor as liaison with a particular curricular area, not only for the purpose of helping the department with ideas, materials, and units in career guidance, but also to provide feedback regarding any areas of conflict. One of the outcomes of many of the attempts to initiate dialogue and improve communication seems to be increased counselor empathy with members of other disciplines and greater teacher understanding of the relationships of career guidance to the curriculum. Perhaps increased interdisciplinary approaches utilizing the skills and talents of both teachers and counselors will help each to understand better the potential contribution of the other to the development of children and will help to reduce the sometimes existent discord in teacher-counselor relations (Kushel, 1967).

PUBLIC ATTITUDES TOWARD CAREER GUIDANCE

One of the major problems in implementing more effective career guidance programs and practices is the need to change attitudes. There exists an enormous public relations task to convince teachers, administrators, and even some counselors that career guidance is important.

Valuing Students' Vocational Concerns

A paradox exists in the question of the importance of vocational guidance. While parents are concerned about vocational floundering, and students consider educational-vocational planning a priority concern, teachers do not always concur. Both Anonsen (1961) and Norman (1963) found that students rank educational-vocational problems high in their hierarchy of problems, but that teachers do not perceive educational-vocational problems to be a significant concern of students.

The problem of teacher attitudes toward activities which take time away from their planned curriculum — such as vocational planning units — is one which has not been resolved in most schools. Some teachers perceive activities such as those of National Vocational Guidance Week or weekly career speakers as intrusions upon their time. Others think units are all right "as long as they don't take time away from my class." Some actually oppose career guidance activities because they believe that career decisions are something that just happen when a student is ready and that vocational planning is a lot of "hogwash." The concept of accelerating planfulness or of a conscious or rational approach to career planning has not permeated their thinking.

Although resistance to career guidance appears to be greatest when it impinges on curricular time, there are a number of teachers who are actively involved in planning and teaching career development units and other vocational guidance activities. They are concerned about making students' school experience more relevant, and they are focusing on career exploration, occupational values, and vocational self-study as one means of doing so. In spite of some encouraging signs of actively-involved teachers and changing attitudes, this is an issue which will have to be dealt with if career guidance is going to become a part of the curriculum.

Counselor Attitudes

Even more surprising, some counselors are not convinced of the importance of career guidance. Although Anonsen and Norman found that counselors perceived educational-vocational concerns to be of greater significance to students than did teachers, the lack of importance of this area to counselors would seem to be reflected in the proportionately small amount of time counselors spend in vocational counseling or vocational guidance activities. While the situation is improving, much remains to be done if counselors are to have an impact on the vocational development of the young people with whom they work.

The apparent lack of counselor interest in vocational counseling may also be a reflection of the nature of counselor preparation programs, programs in which other counselor functions are stressed. Counselors may not have had the background, the information, the training, or the practical experience to feel comfortable with educational-vocational counseling. The counselor education action projects cited indicate that many avenues are already being used to try to remedy this situation.

Whatever the reasons for teacher or counselor attitudes, much remains to be done. Allen, an innovator in school organization and teacher education, has suggested that "seventy percent of what a counselor does in the schools you do not need a counselor to do [1968]." He specifically criticizes counselors for not providing more attention to, and help in, student career decisions.

Strategies for Change

Before improvements and changes can be made to assure that career guidance is a more viable part of the school and an integral part of the curriculum, perhaps strategies of change have to be planned. Foshay (1966), a curriculum specialist, suggests a "comprehensive change strategy" which would include:

1) analyzing the school system, its hierarchical patterns, and power structure;
2) having a specific plan or design;
3) creating local interest and awareness, and, hopefully, gaining approval of the *de facto* leadership and the community;
4) providing for local evaluation and tryout.

He suggests that the system must be entered through the supporting community, the materials of instruction, and, most important, through the teachers and students.

Pruitt, a counselor educator, believes that all teachers have a part in career guidance; whether it is conscious, deliberate, and systematic or not, career development will take place. She suggests that, even without occupations units, each teacher can give a student "the opportunity to look at vocations through the window of one's subject [Pruitt, 1968]." She cites the failure of teachers to call to the attention of their students the fact that their subjects are the foundation for many occupations. She contends, too, that teachers often do not have major information about the jobs in which their subjects are primary. She feels that the teacher plays a key role by intervening in a student's life at convenient junctures to help him in self-development. A mathematics teacher, for example, needs to communicate to the student answers to the question, "How does mathematics change me as an individual and make me a better person?" The same might be said of teachers of other subjects.

Pruitt recommends the "cadre approach" to educational change for career guidance. Her cadre includes the teacher, counselor, and administrator, who as a team communicate horizontally, plan systematically, and consult sensitively together before attempting to implement career guidance in the curriculum (1968).

Career Development as Self-Development

Perhaps even more important than planning strategies of change is the need to communicate to all those involved in career guidance — students, parents, teachers, administrators, vocational educators, counselor educators, teacher educators, and curriculum specialists — that career development is self-development viewed in the context of work (paid and non-paid) and a key aspect of total personal development. Perhaps the communications problems will not be so great if those concerned can understand that career guidance efforts, activities, and experiences — whether a part of the systematic curriculum or part of counseling — are geared toward helping individuals in their continuing search for identity through the development, crystallization, and acceptance of an adequate and integrated self-concept. However, the perception of career guidance as facilitating the development of human potentialities, as assisting in the search for identity, as accelerating the process of discovering "Who I am" and "What it is possible to become," is one which has not yet taken hold in the schools. Perhaps some of the programs and practices described in these pages will help bring the schools closer to that goal, a vocational guidance goal beautifully (but probably inadvertently) expressed by James Michener in *Fires of Spring*:

> For this is the journey that men make: to find themselves. If they fail in this, it doesn't matter much what else they find. Money, position, fame, many loves, revenge are all of little consequence, and when the tickets are collected at the end of the ride, they are tossed into the bin marked Failure. But if a man happens to find himself — if he knows what he can be depended upon to do, the limits of his courage, the position from which he will no longer retreat . . . the secret reservoirs of his determination, the extent of his dedication, the depth of his feeling for beauty, his honest and unpostured goals — then he has found a mansion which he can inhabit with dignity all the days of his life.

In the words of Eldon Ruff, past president of the American School Counselor Association, "This . . . is our job as school counselors — to help each child find himself, and to use his abilities and understandings to build a mansion which he can inhabit with dignity all the days of his life [1968, p. 2]."

This is the real meaning behind these programs and these practices: these developmental curricula, these occupations units, these career conferences, these industrial visits, these counselor workshops, these school-community efforts, these computerized approaches to occupational information and counseling, these research projects, these new occupational information media, these innovative programs in vocational education, these courses in skill-centered learning, and these special programs for special needs.

In spite of these imaginative efforts in schools and communities across the nation to help young people explore and develop their potentialities, many challenges remain. It is apparent that vocational guidance is not limited to what takes place in the counseling office, important as that may be. It is becoming increasingly evident that career development holds implications for the total school curriculum and the community and that teachers, counselors, administrators, and parents — as well as students themselves — have responsibilities for furthering this development.

Summary

This chapter has presented a capsule summary of trends which offer encouragement to the improvement of vocational guidance services in the schools. Selected unmet needs, concerns, challenges, and illustrative programs are presented, including career guidance in relation to 1) new school organization, 2) teacher preparation and counselor education, and 3) public attitudes toward vocational guidance. Strategies for change are suggested, along with a plea that a partnership approach including teachers, counselors, administrators, parents and business and industry be used to further the development of career guidance as part of the total school curriculum.

REFERENCES

Allen, D. Educational change: Waves or ripples. Speech presented at Midwinter Conference, Minnesota Counselors Association, St. Paul, February 1968.

Anderson, A. R., & Johnson, D. L. Using group procedures to improve human relations in the school social system. *The School Counselor*, 1968, 15, 334–342.

Andros, G. C. *Self-administering vocational information system. Development of the self-component*. Charleston, West Virginia: Appalachia Educational Laboratory, 1967. (a)

Andros, G. C. *Self-administering vocational information system. Procedure for the development of the unit — the biological-medical field*. Charleston, West Virginia: Appalachia Educational Laboratory, 1967. (b)

Anonsen, G. *Students', counselors' and teachers' perceptions of the severity of students' problems*. University of Minnesota, Minneapolis, June 1961.

Baer, M., & Roeber, E. *Occupational information: Its nature and use*. (3rd ed.) Chicago: Science Research Associates, 1964.

Banister, R. E. San Diego's career information center. *California Educator*, 1967, 3, 162–169.

Barbula, M. Life career game. San Diego: San Diego County Department of Education, 1967.

Barrett, R. *Your future: An outline for the ninth grade career planning unit*. St. Paul: Minnesota State Department of Education, Guidance Series, 1966.

Beachley, C. L. The use of television in guidance. A case history of the experimental program in Washington County, Maryland. *Occupational Outlook Quarterly*, 1958, 2, 19–23.

Beachley, C. L. Careers via closed-circuit television. *Vocational Guidance Quarterly*, 1958–59, 7, 67–70.

Beachley, C. L. A pioneering project. (Utilizing closed circuit television for guidance). Hagerstown, Maryland: Washington County Board of Education, 1962.

Beachley, C. L. When guidance rides the airwaves. Young minds are stretched to new horizons. *Audiovisual Instruction*, 1963, 8, 39–42.

Beachley, C. L. Guidance and television. In R. M. Diamond (Ed.), *Guide to instructional television*. New York: McGraw-Hill, 1964. Pp. 118–124.

Beachley, C. L. Using a technological innovation as a catalyst in educational and vocational guidance. *MASCD Journal*, 1965, 1(1), 29–36.

Board of Cooperative Educational Services. *Multi-occupations at Harkness Center*, Progress Report No. 1. Buffalo, New York: BCES, 1968.

Boocock, S. S. The life career game. *Personnel and Guidance Journal*, 1967, 46, 328–334.

Borow, H. Conjunction of career development and curriculum: Problems and potentials. Paper presented at Conference on Implementing Career Development Theory and Research Through the Curriculum, National Vocational Guidance Association, Warrenton, Virginia, May 1966. (a)

Borow, H. The development of occupational motives and roles. In L. W. Hoffman & M. L. Hoffman (Eds.), *Review of child development research.* Vol. 7. New York: Russell Sage Foundation, 1966. Pp. 373–422. (b)

Borow, H. Guidelines for research. In R. E. Campbell (Ed.), *Guidance in vocational education: Guidelines for research and practice.* A report of a National Interdisciplinary Seminar, Ohio State University, January, 1966. Columbus: Ohio State University, Center for Vocational and Technical Education, 1966. Pp. 163–165. (c) (ED 011 922; MF — $0.75; HC — $9.60)

Borow, H. Occupational information in guidance practice viewed in the perspective of vocational development theory and research. Paper presented at the Conference on Occupational Information and Vocational Guidance, University of Pittsburgh, March 1966. (d) (ED 014 736; MF — $0.25; HC — $0.64)

Boynton, R. E. New models and techniques in career guidance. In J. V. Rich (Ed.), *The use of information in personnel services.* Ann Arbor: Counseling and Personnel Services Information Center, Current Resource Series, April 1968.

Burkett, L. A. The role of guidance in vocational education. Speech presented at the National Conference on Occupational Information in Vocational Guidance, Chicago, May 1967.

Campbell, R. E. (Ed.) *Guidance in vocational education: Guidelines for research and practice.* A report of a National Interdisciplinary Seminar, Ohio State University, January 1966. Columbus: Ohio State University, Center for Vocational and Technical Education, 1966. ED 011 922; MF — $0.75; HC — $9.60)

Campbell, R. E., Tiedeman, D. V., & Martin, A. M. Systems under development for vocational guidance. A report of a Research Exchange Conference, Ohio State University, August 1966. Columbus: Ohio State University, Center for Vocational and Technical Education, 1966. (ED 011 039; MF — $0.50; HC — $3.60)

Career planning handbook. University of Minnesota, Minneapolis: University High School, 1967–68.

Careers of the month program. Levelland, Spearman, Petersburg and Abilene Public Schools, Texas Education Agency, Austin, Texas.

Carkhuff, R. R. Counseling research theory and practice — 1965. *Journal of Counseling Psychology*, 1966, 13, 476–480.

Chamber of Commerce of the United States. *How to plan economic understanding projects.* Washington, D.C.: CCUS, 1963.

Chamber of Commerce of the United States. *Target: Employment.* Washington, D.C.: CCUS, 1964.

Christenson, T. What happened to the class of 1967, an invitation to making decisions. Massachusetts Public Schools, Worcester, 1968.

Clarke, R., & Gelatt, H. B. NDEA guidance report to the board of education. Palo Alto Unified School District, Palo Alto, California, December 1963.

Cogswell, J. F., Donahoe, C. P., Jr., Estavan, D. P., & Rosenquist, B. A. The design of a man-machine counseling system. A paper presented at the meeting of the American Psychological Association, September 1966.

College Entrance Examination Board. *Preparing school counselors for educational guidance.* Report of a Conference on Guidance for Post-Secondary Education, Chicago, March 1966. New York: CEEB, 1967.

Colorado State Department of Education. Guidance program planning. Denver: CSDE, Division of Guidance Services, January 1967.

Computer-based vocational guidance systems. Summary of papers presented at the Fourth Symposium for Systems under Development for Vocational Guidance. U.S. Department of Health, Education, and Welfare and Office of Education. Washington, D.C.: U.S. Government Printing Office, 1969.

Cook, H. E. *Occupational information materials.* Progress Report No. 1, Atlanta Public Schools, Atlanta, Georgia, Grant No. OEG-3-7-703453-4554, August 31, 1967.

Cook, H. E. *Occupational information materials.* Progress Report No. 2, Atlanta, Public Schools, Atlanta, Georgia, Grant No. OEG-3-7-703454-4554, October 31, 1967.

Cook, H. E. *Occupational information materials.* Progress Report No. 3, Atlanta Public Schools, Atlanta, Georgia, Grant No. OEG-3-7-703454-4554, December 31, 1967.

Cook, H. E. *Occupational information materials.* Progress Report No. 4, Atlanta, Public Schools, Atlanta, Georgia, Grant No. OEG-3-7-703454-4554, February 29, 1968.

Cook, H. E. Selected bibliography of occupational literature in libraries of nine Atlanta public elementary schools. Occupational Information Materials Project. Atlanta, Georgia: Atlanta Public Schools Professional Library, and the Area III Resource Library, 1969.

Crites, J. O. Vocational development and vocational education in adolescence. Research proposal, January 8, 1965.

Curriculum programs in action. Their administration and evaluation. San Francisco State University, Center for Technological Education, and University of Wisconsin, Center for Studies in Vocational and Technical Education, 1967.

Dailey, J. T. & Neyman, C. A., Jr. *Development of curriculum materials for teaching basic vocational talents.* George Washington University, Washington, D.C., Contract No. OE-S-85-023, July 1967.

D'Costa, A., Winefordner, D. W., Odgers, J. G., & Koons, P. B., Jr. *Ohio vocational interest survey.* New York: Harcourt, Brace & World, 1968.

Drews, E. M. *The creative intellectual style in gifted adolescents. Motivation to learn: Attitudes, interests and values.* Michigan State University, East Lansing, Contract No. OEC-SAE-9101-5-0460-2-12-1, 1964.

Drews, E. M. *The creative intellectual style in gifted adolescents. Being and becoming: A cosmic approach to counseling and curriculum.* Michigan State University, East Lansing, Grant No. OEG-7-32-0410-140, 1965.

Drews, E. M. *The creative intellectual style in gifted adolescents. Process and product: A reassessment of students and program.* Michigan State University, East Lansing, 1966.

Drier, H. Vocational guidance in action. *Guidelines.* Newsletter of Wisconsin State Department of Public Instruction, 1967, 5, 145–147.

DuBato, G. S. A feasibility study to investigate the structure and operation of a model occupational information dissemination unit which would operate between the New York Employment Service and the New York State Education Department. Final Report. Grant No. OEG-1-7-063019-2924, June 1967.

DuBato, G. S. A plea for vocational guidance in the schools. Including suggestions for group guidance activities on self-appraisal and careers for grades K through 12. City University of New York, Queens College, Flushing, (no date).

Dugan, W. E. Vocational guidance: A new accent in American education. *American Vocational Journal*, 1966, 41(7), 14-15.

Dunwoody offers course, "Counseling for industrial, trade and technical occupations." *Minnesota Guidance Bulletin*, Spring 1966, p. 5.

Eisen, N. B. *Exploratory work experience education*. Whittier Union High School, Whittier, California, October 1966.

Eisen, N. B. *Work experience education in the Whittier Union High School*. A manual for teachers, counselors, and administrators. Whittier, California (no date).

E S '70 News. Educational System for the Seventies, 1(1), May 1968.

E S '70 News. Educational System for the Seventies, 1(2), June 1968.

Fibkins, W. A. A different approach to sharing occupational information. *The School Counselor*, 1969, 16, 390–393.

Firms plan to introduce youth vocational opportunities. *St. Paul Dispatch*, February 19, 1968.

Flanagan, J. C. Developing a functioning model of an educational system for the '70's. American Institutes for Research, Pittsburgh, 1967.

Flanagan, J. C. Functional education for the seventies. Phi Delta Kappan, September, 1967, 27–32.

Foshay, A. W. Strategies for curriculum change. In *Conference on implementing career development theory and research through the curriculum*. Final Report. National Vocational Guidance Association, Washington, D.C., August 1966, Pp. 1–16.

Frank, R. Self-development through vocational awareness. A series of teaching units developed at Northern Iowa University, NDEA Institute, 1967.

Franklin, F., Murphy, M. R., & Donner, R. Charles Eliot Junior High School team report. Case Western Reserve University, Cleveland, July 17, 1967.

Gambino, T. *Increasing the vocational awareness of fifth and sixth grade pupils*. Trenton: New Jersey State Department of Education, Division of Vocational Education, 1968.

Gelatt, H. B. Information and decision theories applied to college choice and planning. Speech presented at College Entrance Examination Board Conference, Chicago, March 1966.

Gerstein, M., & Hoover, R. VIEW—Vocational information for education and work. *Personnel and Guidance Journal*, 1967, 45, 593–596.

Ginzberg, E., & Hiestand, D. L. In J. M. Rosenberg (Ed.), *New conceptions of vocational and technical education*. New York: Teachers College Press, 1967.

Gordon, A. S. Career development program for elementary intermediate grade children. Chicago: City Board of Education, 1968.

Green, L. F. *Counseling employment-bound students.* Oakland Guidance Project Report. Oakland County, Michigan, June 1965.

Gribbons, D., & Lohnes, P. R. Career development. Regis College, Weston, Massachusetts, 1966. (ED 010 282; MF — $1.25; HC — $15.20)

Grossmont Union High School. Studies in success. A promising approach to the vocational guidance of average high school students. Grossmont School District, Grossmont, California, 1965. (ED 010 703; MF — $0.75; HC — $6.50)

Guidance Associates. *Guidance catalog.* A comprehensive curriculum of guidance and family life materials. Pleasantville, New York: Harcourt, Brace, & World, 1969.

Gysbers, N. C. An evaluation of the seminar using data obtained from a follow up survey of seminar participants. University of Missouri, Columbia, August 1968.

Gysbers, N. C., & Joslin, L. C. Preparing counselors for vocational guidance. Proceedings of the National Seminar on Vocational Guidance, University of Missouri, Columbia, August 1967.

Hansen, L. S. Pilot projects try out life career game with students, teachers, and counselors. *Minnesota Guidance Bulletin*, Autumn 1967. (a)

Hansen, L. S. Theory into practice: A practitioner looks at career guidance in the school curriculum. *Vocational Guidance Quarterly*, 1967, 16, 97-103. (b)

Hansen, L. S. *Career planning unit.* A sample team-teaching unit for ninth grade. University High School, Minneapolis, April 1968.

Harris, J. A. A report on the project for computerization of vocational information. State of Illinois Board of Vocational Education and Rehabilitation, Research Coordination Unit and District 88 project. Villa Park, Illinois, September 1967. (ED 019 840; MF — $0.25; HC — $0.65)

Hawaii State Department of Education. Educational-occupational unit, grade 11. Honolulu: HSDE, March 1963.

Hawaii State Department of Education. Secondary school guidance in Hawaii. Supplement to chapter II, Guidance emphases by grades, *Guidance Handbook.* Honolulu: HSDE, Guidance and Special Education Branch, June 1966.

Holland, L. Major programs of research on vocational behavior. In H. Borow (Ed.), *Man in a world at work.* Boston: Houghton Mifflin, 1964. Pp. 259–286.

Hopke, W. E. A new look at occupational literature. *Vocational Guidance Quarterly*, 1966, 15, 18–25.

Hopkins, C. E. Career exploration via mass media. Atlanta Public Schools, Atlanta, Georgia, 1968.

Hoppock, R. Educational and occupational information from kindergarten to grade 12: Implications for supervision and counselor education. In *National Seminar on Vocational Guidance*, Northern Michigan University, Marquette, August 1966. Pp. 39–48.

Hoppock, R. *Occupational Information.* New York: McGraw-Hill Company, 1968 (Third edition).

Hoyt, K. B. An introduction to the specialty-oriented student research program. University of Iowa, Iowa City, 1962.

Hoyt, K. B. A challenge to vocational guidance: The specialty-oriented student. *Vocational Guidance Quarterly*, 1963, 11, 192–198.

Hoyt, K. B. The challenge of guidance to vocational education. Speech presented at 59th Annual Convention of American Vocational Association, Miami Beach, December 1965.

Hoyt, K. B. The challenge of vocational education to guidance. Speech presented at Conference on Counseling Employment-Bound Youth, North Central Michigan Guidance Association, May 1966.

Hoyt, K. B. Professional partnerships to serve students. *American Vocational Association Journal*, 1966, 41(7), 23–25 ff.

Hoyt, K. B. What kinds of occupational information exist and what are their limitations. Speech presented at University of Pittsburgh, March 12–13, 1966.

Hoyt, K. B. Promising practices in the use of occupational information. Address at National Conference on Occupational Information, U.S. Office of Education, Chicago, May 1967.

Hoyt, K. B. Meeting the challenge of vocational development in a changing society. Speech. University of Iowa, Iowa City.

Hoyt, K. B. The school counselor's self-understanding. Unpublished manuscript, University of Iowa.

Hoyt, K. B., & Griffith, W. D. Guidance, educational media, and vocational education. Unpublished manuscript, University of Iowa.

Illingworth, R. N. The quad-city industrial orientation program for counselors, Summer 1967. Eastern Iowa Community College, Bettendorf, Iowa, 1967.

Impellitteri, J. T. A computerized occupational information system. *Vocational Guidance Quarterly*, 1967, 15, 262–264.

Impellitteri, J. T. *The development and evaluation of a pilot computer-assisted occupational guidance program*. Final Report. Pennsylvania Department of Public Instruction Project. University Park: Pennsylvania State University, Department of Vocational Education, July 1968.

Implications of federal legislation for school counselors. In C. G. Morehead & F. G. Fuller (Eds.), *Career planning and development*. Report of Advanced Workshop, North Carolina State Department of Public Information, Raleigh, June 1965.

Information system for vocational decisions. *Annual Report 1966–67*. Harvard Graduate School of Education, New England Education Data System, Newton (Massachusetts) Public School System, September 1967.

Information system for vocational decisions. *Annual Report 1967–68*. Harvard Graduate School of Education, New England Education Data System, Newton (Massachusetts) Publc School System, September 1968.

Instructional Systems Corporation and Follett Counseling Information Service. A systems approach to group guidance. Palo Alto, California: Follett Publishing Company, 1967. (a)

Instructional Systems Corporation and Follett Counseling Information Service. *You the decision maker*. Counselor's manual. Palo Alto, California: Follett Publishing Company, 1967. (b)

Jeffries, D., & Spedding, S. *Career guidance manual for teachers*. Developmental Career Guidance Project. Detroit: Wayne State University and Detroit Public Schools, 1968.

Jerome, D. R. Personal letter sent August 29, 1967.

Johnson, J. L. A workshop for secondary school counselors to improve their competencies in working with technically-oriented students. Ferris State College, Big Rapids, Michigan, August 1967.

Jones, G. B. Letter, September 12, 1967.

Katz, M. R. *You: Today and tomorrow*. Princeton, New Jersey: Educational Testing Service, 1959.

Katz, M. R. The description and evaluation of a guidance text for 8th and 9th grade. Harvard University, Cambridge, Massachusetts, 1960.

Katz, M. R. *Decisions and values: A rationale for secondary school guidance*. New York: College Entrance Examination Board, 1963.

Katz, M. R. A model of guidance for career decision-making. *Vocational Guidance Quarterly*, 1966, 15, 2–10. (a)

Katz, M. R. The name and nature of vocational guidance. National Vocational Guidance Association, August 1966. (b)

Katz, M. R. Rationale for a computer-assisted system of interactive guidance and information. Paper read at the annual meeting of the College Entrance Examination Board and the College Scholarship Service Assembly, New York, October 29, 1968.

Katz, M. R. Can computers make guidance decisions for students? *College Board Review*, Summer 1969, 72, 13–17.

Kentucky State Department of Education. Planning the career day. Frankfort, Kentucky: KSDE, Division of Guidance Services, 1962.

Krumboltz, J. Vocational problem-solving experiences for stimulating career exploration and interest. Stanford University, Palo Alto, August 1967. (Abstract of final report) (ED 015 517; MF — $2.25; HC — $30.10)

Krumboltz, J. D., & Thoresen, C. The effect of behavioral counseling in group and individual settings on information-seeking behavior. *Journal of Counseling Psychology*, 1964, 11, 324-333.

Kushel, G. *Discord in teacher-counselor relations*. Cases from the teacher's view. Englewood Cliff, New Jersey: Prentice-Hall, 1967.

Leonard, G. E. *How to face future success*. A handbook for Detroit high school students. Developmental Career Guidance in Action. Detroit: Wayne State University and Detroit Public Schools, 1966.

Leonard, G. E. *Developmental career guidance in action*. Detroit: Wayne State University and Detroit Public Schools, 1968.

Leonard, G. E. and Vriend, T. J. *1968 Vocational Guidance Institute*. Developmental Career Guidance in Action. Detroit: Plans for Progress and Wayne State University, 1968.

Leonard, R. *Developmental career information program*. Minneapolis Public Schools, Minnesota, 1967.

Letson, J. W. Formulation of models for preparing occupational materials for pupils from various socio-economic levels in grades three through eight. Atlantic Public Schools, Atlanta, Georgia, January 1967.

Letson, J. W. Sequential dissemination of occupational information. Draft of a proposal. Atlanta Public Schools, Atlanta, Georgia, January 1968.

Lewis, D. Opportunity: Goodyear teaches the teachers. *The Wingfoot Clan*, Goodyear Company, Akron, Ohio, July 1967.

Los Angeles City School District. *Career guidance in-service education*. Division of Secondary Education, Los Angeles, October 1967.

Lothspeich, W. F. Career planning development committee. Vancouver, Washington, Summer 1967.

Loughary, J. The information explosion and its implications for the counseling function. Paper presented at College Entrance Examination Board Invitational Conference on the Preparation of School Counselors, Chicago, February 1966. (ED 015 487; MF — $0.25; HC — $1.05)

Loughary, J. W., Friesen, D., & Hurst, R. Autocoun: A computer-based automated counseling simulation system. *Personnel and Guidance Journal*, 1966, 45, 6–15.

Magoon, T. M. A model of effective problem solving applied to educational and vocational planning with students. University of Maryland, College Park: Counseling Center Research Report No. 13–65, 1965.

Mangan, T. L. Proposal for a school habilitation program in Anoka Hennepin School District #1. Minnesota State Department of Education, 1967.

Martin, A. M. Multi-media approach to communicating occupational information to noncollege youth. *Quarterly Reports*, July–September 1966; October–December 1966; January–March 1967. (ED 017 005; MF — $1.00; HC — $13.10)

Martin, A. M. A report of the Communication in Guidance Project. Washington, D.C., April 21–23, 1967.

Martin, A. M., & Hummel, R. Occupational information and vocational guidance for noncollege youth. Paper presented at the Conference on Occupational Information and Vocational Guidance, University of Pittsburgh, March 1966. (ED 014 736; MF — $0.25; HC — $0.80)

McDaniels, C. (Ed.) Vocational aspects of counselor education. A report of a conference, Airlie House, Warrenton, Virginia, December 12–15, 1965. (ED 010 016; MF — $0.50; HC — $5.15)

McDowell, L. C. Where guidance makes a difference. *American Vocational Journal*, 1966, 41(7), 28–29.

McGrail, T. F. Mr. 1307. *The School Counselor*, 1967, 14, 234–236.

Melnotte, J. M. The application of Project PLAN data to goal-oriented curriculum. Paper read at annual meeting of American Psychological Association, Washington, D.C. September 2, 1969.

Michigan State Board of Education. *Establishing and operating area vocational-technical education programs in Michigan*. Lansing: Michigan State Department of Education, Division of Vocational Education, 1966.

Michigan State Department of Education. *A vertically integrated occupational curriculum for schools in Michigan*. Tentative draft. May 1967.

Miller, D. C., & Form, W. H. *Industrial sociology*. New York: Harper, 1951.

Miller, J. N. New cure for boredom in the classroom. *PTA Magazine*, April, 1966.

Minor, F. J. *Third symposium for systems under development for vocational guidance*. New York: IBM Corporation, IBM Advance Systems Development Division, 1967.

Minor, F. J., Meyers, R. A., & Super, D. E. An experimental computer-based educational and career exploration system. *Personnel and Guidance Journal*, 1969, 47, 564–569.

Morehead, C. G., & Fuller, F. G. (Eds.) *Career planning and development.*

Conference report. North Carolina State Department of Public Instruction, Raleigh, June 1965.

National Vocational Guidance Association. *Conference on implementing career development theory and research through the curriculum*. Final Report. Washington, D.C.: NVGA, Grant No. EIG-2-6-00556-0582, August 1966.

National Vocational Guidance Association. *Project reconceptualization: Classification of issues involving the nature and status of contemporary vocational guidance*. Washington, D.C.: NVGA, 1967.

National Vocational Guidance Association. *Newsletter*, 1967, 7(1).

National Vocational Guidance Association. *Publicity handbook*. Washington, D.C.: NVGA, 1968.

New directions in vocational education. Case studies in change. Washington, D.C.: U.S. Government Printing Office, 1967.

New Jersey State Department of Education. Teaching guide for a model program on introduction to vocations. Trenton: NJSDE, Vocational Division, 1965.

Norman, James. *Students' and teachers' perceptions of students' problems and of school help on these problems*. University of Minnesota, Minneapolis, August 1963.

North American Educational Computer Services, Inc. Scholarships by computer. Princeton, New Jersey: Computerized Scholarship Search Service, 1967.

North Carolina State Department of Public Instruction. *Occupational information. A bibliography*. Free and inexpensive material. Raleigh: NCSDPI, Guidance Services, 1966.

North Carolina State Department of Public Instruction. *Introduction to Vocations*. Raleigh: NCSDPI, 1967.

O'Dell, F., & Richards, K. W. Akron area schools and industry cooperate to help the disadvantaged. *Ohio Guidance News and Views*, November–December 1968.

Odgers, J. G. Coordinating community resources for guidance services. Speech presented to Montana Vocational Guidance Seminar, April 1967.

Odgers, J. G. *Follow-up study, 1966 National Seminar on Vocational Guidance*. American Vocational Association and American Personnel and Guidance Association. Northern Michigan University, Marquette, September 1968.

Odgers, J. G., & Gysbers, N. C. (Eds.) *National Seminar on Vocational Guidance*. Proceedings of a conference at Northern Michigan University sponsored by the American Vocational Association and American Personnel and Guidance Association, Marquette, August 1966.

Ohio State Department of Education, Division of Guidance and Testing. *Ohio notebook of public technical education*. (Rev. ed.) 1967–68.

Ohio State Department of Education, Division of Guidance and Testing, and Ohio School Counselors Association. Guidance for the exploratory years. All Ohio Junior High School Conference, April 1967. (ED 012 088; MF — $0.50; HC — $4.40)

Oklahoma State Department of Education. *A guide for developmental vocational guidance, grades K-12*. Department of Vocational Technical Education, Guidance and Counseling Division, Curriculum Division, and Oklahoma Curriculum Improvement Commission, 1968.

O'Reilly, P. *The self-administering vocational information system (SAVIS)*. Charleston, West Virginia: Appalachia Educational Laboratory, September 1966–September 1967.

Osipow, S. H. *Theories of career development*. New York: Appleton, Century Crofts, 1968.

Patterns for progress. *An extension of the blueprint for action*. Study conducted for the Implementation Committee, Committee of 100, Calhoun County Building, Marshall, Michigan, 1967.

Paulson, B. B., & Gordon, A. S. The career development program — a brief description. Chicago, August 1967.

Perry, D. Educational applications and implications of computer technology. *Student Counseling Bureau Newsletter*, University of Minnesota, 1968, 20, 1.

Peters, H. D. Project P.A.C.E. Dayton City School District, Dayton, Ohio, June 1967.

Pierson, G. N. A career decision program for 8th grade. Reported in a memo from K. B. Ashcraft, May 10, 1966.

Pierson, G. N., Hoover, R., & Whitfield, E. A. A regional career information center: Development and process. *Vocational Guidance Quarterly*, 1967, 15, 162–169. (ED 015 260; MF — $0.25; HC — $0.50)

Pogar, E. Letter, Abington, Pennsylvania, 1967.

Pruitt, A. S. 1967 Workshop on employment problems of Negro high school graduates. Case Western Reserve University, Cleveland, 1967.

Pruitt, A. S. Teacher involvement in the curriculum and career guidance. *Vocational Guidance Quarterly*, 1969, 17(3), 189–193.

Roberts, T. L. Development of a computer-assisted guidance and counseling system. Bartlesville Public Schools, Bartlesville, Oklahoma (No date given).

Robinson, L. R. High school orientation program — a four-phase program of school cooperation. Sacramento: California State Department of Education, 1966. (ED 012 059; MF — $0.25; HC — $0.65)

Rochester City School District. Proposal for computer-assisted vocational guidance project. Rochester, New York, September 1967.

Rosenberg, J. M. (Ed.) *New conceptions of vocational and technical education*. New York: Teachers College Press, 1967.

Roseville Public Schools. *Career planning. An outline for the ninth grade unit*. St. Paul: Minnesota State Department of Education, 1966.

Ruff, E. Our job as a counselor. *ASCA Newsletter*, 1968, 5(3), 2.

Ruff, E. E., & Gold, E. Preparing counselors for developing a maximum range of vocational maneuverability in students. A project proposal in vocational guidance. South Bend, Indiana, Summer 1967.

Rundquist, R. Library of occupational information interview tape recordings. University of Kansas, Lawrence, Summer 1965.

Samler, J. The counselor and technological change. *SRA Guidance Newsletter*, March-April 1966, 1-2.

Samuelson, L., & Edelson, A. Career information center. *New York State Personnel and Guidance Journal*, 1966, 1(1), 23-25.

San Diego County Department of Education. *VIEWPOINT — Entry employment in San Diego*. Handbook. San Diego, California: SDCDE, Summer 1965.

San Francisco State College Center for Technological Education. *Description of activities.* San Francisco: SFSCCTE, 1967.

San Francisco State College Center for Technological Education. *Technology and education in the 21st century.* San Francisco: SFSCCTE, 1967.

Sanstead, J. A survey of the ninth grade occupational information units taught in Minnesota public schools. University of Minnesota, Minneapolis, December 1966.

Schlossberg, N. K., & Woodruff, J. W. *The career community aide: A workbook and manual for paraprofessionals in guidance.* Developmental Career Guidance Project. Detroit: Wayne State University, January 1968.

SEARCH. *College selection by computer.* Boston: Contact Computer Corporation, 1968.

Shelley, M. Report of elementary school guidance project. In *Elementary guidance: The developmentally centered and the crisis centered approaches.* Report of the Sixth Annual All-Ohio Elementary School Guidance Conference, November 1966.

Slocum, W. L. The potential contribution of sociology to occupational guidance through the curriculum. Washington State University, Pullman: College of Agriculture, Research Center, 1967.

Stiller, A. *Beacon lights.* Project BEACON. Rochester City School District, Rochester, New York, 1968.

A student career exploration project. A cooperative project between the Minneapolis Rotary Club and the Minneapolis Public Schools. Fall 1968.

Super, D. E. A theory of vocational development. *The American Psychologist,* 1953, 8, 185-190.

Super, D. E. *Career development: Self-concept theory.* New York: College Entrance Examination Board, 1963.

Super, D. E. A reconceptualization of vocational guidance. National Vocational Guidance Association, June 1967. (Reproduced by Ohio State Department of Education, Division of Guidance and Testing.)

Super, D. E., Crites, J., Hummel, R., Moser, H., Overstreet, P., & Warnath, C. *Vocational development: A framework for research.* New York: Teachers College Press, 1957.

Super, D. E., Kowalski, R. S., & Gotkin, E. *Floundering and trial after high school.* New York: Teachers College Press, 1967.

Super, D. E. Using computers in guidance: an experiment in a secondary school. Paper presented at Fourth International Congress of Educational and Vocational Guidance, Mexico City, Mexico, August 18, 1969.

Super, D. E., & Overstreet, P. L. *The vocational maturity of ninth grade boys.* New York: Teachers College Press, 1960.

Swanson, L. Career information project. Como Park Junior High School, St. Paul, Minnesota, 1966.

Tennyson, W. W. *The teacher's role in career development.* Washington, D.C.: National Vocational Guidance Association, 1965.

Tennyson, W. W. and Ashcraft, K. Conference on implementing career development theory and research through the curriculum. National Vocational Guidance Association, Warrenton, Virginia, May 1966.

Tennyson, W. W. Guidelines for practice. In R. E. Campbell (Ed.), *Guidance in vocational education: Guidelines for research and practice.* A report of a

National Interdisciplinary Seminar, Ohio State University, Center for Vocational and Technical Education, Columbus, January 1966. (ED 011 922; MF — $0.75 HC — $9.60)

Tennyson, W. W. Career development. *Review of Educational Research,* October 1968, 346-366.

Tennyson, W. W., & Klaurens, M. Behavioral objectives for career development. University of Minnesota, Minneapolis, Distributive Education and Counselor Education, Summer 1968. (a)

Tennyson, W. W., & Klaurens, M. Suggested teaching-learning approaches for career development in the curriculum. University of Minnesota, Minneapolis, College of Education, Distributive Educators and Counselors Enrolled in a Pilot Training Project Focusing on Occupational Experience and Career Development, Summer 1968. (b)

Tennyson, W. W., & Meyer, W. G. *Pilot training project for teachers of distribution and marketing focusing on responsibilities for career development.* University of Minnesota, Minneapolis, College of Education, Summer 1967.

Tiedeman, D. Information system for vocational decisions. Project Report No. 1, The organization and intention of a proposed data and educational system for vocational decision-making. Cambridge, Massachusetts: Harvard University, Graduate School of Education, 1965.

Tiedeman, D., & Dudley, G. A. Prospects for technology and commerce in the mediation of vocational development for vocational materials. Cambridge, Massachusetts: Harvard University, Graduate School of Education, 1967.

Tiedeman, D. V., & O'Hara, R. P. *Career development: Choice and adjustment.* New York: College Entrance Examination Board, 1963.

Tillery, D. Grade eleven profile 1968 questionnaire selected items (SCOPE). University of California, Berkeley: Center for Research and Development in Higher Education, and College Entrance Examination Board, 1969.

Tondow, M. Comments on "A computer measurement system for guidance." *Harvard Educational Review,* 1965, 35.

U.S. Department of Labor. *Career guidance.* A report of the Subcommittee on Career Guidance of the Committee on Specialized Personnel, Manpower Administration, 1966.

Varenhorst, B. The life career game: Innovative tool for group counseling. *The School Counselor,* 1968, 15, 375–362.

Walz, G. R. The design and implementation of information systems for pupil personnel services. Workshop at APGA Convention, Dallas, April 1967.

Wilson, E. H. A task oriented course in decision-making. Information System for Vocational Decisions, Project Report No. 7. Cambridge, Massachusetts: Harvard University, Graduate School of Education, April 1967. (ED 014 119; MF — $0.75; HC —$9.00)

Winefordner, D. W. et al. *Suggested model for the full-time counselor who conducts and coordinates an exploratory program in grades 7–9.* Conference report. West Georgia College, Carrollton, Georgia, August 1968.

Wisconsin State Department of Public Instruction. General Electric summer guidance fellowship programs — 1967. *Guidelines,* 1967, 5(2).

Workshop reveals innovative approaches. *CAPS Capsule,* Winter 1968.

Yabroff, W. W. *Invitation to decision.* Palo Alto Unified School District, Palo Alto, California, 1966.

Youst, D. The Rochester career guidance program. *Educational Technology*, 1969, 9, 39–41.

Yunker, J. A. Pre-high school vocational group guidance for potential dropouts and non-college-bound students. Research report. Tracy Elementary School District, California, July 1967. (ED 012 944; MF — $0.25; HC — $1.95)

SUPPLEMENTARY REFERENCES*

Chapter I

Anderson, T. B., & Olsen, L. C. Congruence of self and ideal-self and occupational choices. Washington, D.C.: American Personnel and Guidance Association, 1965. (ED 012 174; MF — $0.25; HC — $0.60)

Ashcraft, K. B. A report of the invitational conference in implementing career development theory. Washington, D.C.: National Vocational Guidance Association, 1966. (ED 010 182; MF — $1.00; HC — $10.35)

Bailey, J. A. Career development concepts: Significance and utility. University of Nevada, Reno: Nevada Research Coordinating Unit, October 1967 (ED 017 942; MF — $0.25; HC — $0.84)

Bailey, J. A. Rank order values of career development concepts as rated by trustees of NVGA, NECA, ASCA, and AVA. Reno, Nevada, August 1967.

Borgen, F. H., Weiss, D. J., Tinsley, H. E., Dawis, R. V., & Lofquist, L. H. *Occupational reinforcer patterns.* Minnesota Studies in Vocational Rehabilitation, Work Adjustment Project, Industrial Relations Center, Minneapolis, 1969. (Bulletins 47, 48, 49)

Brubaker, D. L. Anthropology and vocational guidance. *Vocational Guidance Quarterly*, 1967, 15, 209–212.

Buchheimer, A. From drudgery to anxiety. *Vocational Guidance Quarterly*, 1965, 14, 77–82.

Campbell, R. E. *Vocational guidance in secondary education.* Center for Vocational and Technical Education, Ohio State University, Columbus, Ohio, 1968.

Cottingham, H. F. Changing perspectives in vocational guidance. *Vocational Guidance Quarterly*, 1963, 11, 282–285.

Cox, R. D. New emphases in vocational guidance. *Vocational Guidance Quarterly*, 1961, 10, 11–15.

Crites, J. O. Measurement of vocational maturity in adolescence: Attitude test and the vocational development inventory. *Psychological Monographs*, 1965, 79(2).

Dole, A. A. Followup studies of the determinants of educational-vocational choices. University of Hawaii, Honolulu, 1965. (ED 003 350; MF —$1.00; HC — $13.20)

Ehrle, R. A. *Vocational guidance: a look at the state of the art.* Hyattsville, Maryland: Robert Martin and Associates, Inc., 1969.

*In the interest of more comprehensive documentation of the literature, pertinent references which are not specifically cited in the text of this volume are listed here by chapter arrangement.

Garbin, A. P., Jackson, D. P., & Campbell, R. *Worker adjustment: Youth in transition from school to work.* An annotated bibliography of recent literature. Ohio State University, Columbus: Center for Vocational and Technical Education, 1967.

Havighurst, R. J. Youth in exploration and man emergent. In H. Borow (Ed.), *Man in a world at work.* Boston: Houghton Mifflin, 1964. Pp. 215–236.

Herr, E. L. Unifying an entire system of education around a career development theme. National Conference on Exemplary Programs and Projects, Atlanta, Georgia, March 12–14, 1969.

Hershenson, D. B. Techniques for assisting life-stage vocational development. *Personnel and Guidance Journal,* 1969, 47, 776–780.

Hill, W. G. The state of the field, the professional practice of vocational guidance. *Vocational Guidance Quarterly,* 1963, 11, 151–161.

Hinrichs, G. Vocational development in the school setting. *New York State Personnel and Guidance Journal,* 1966, 1(1), 3–11.

Holland, J. L. Explorations of a theory of vocational choice. Part I: Vocational images and choice. *Vocational Guidance Quarterly,* 1963, 11, 232–239.

Holland, J. L. Explorations of a theory of vocational choice. Part II: Self descriptions and vocational preferences. *Vocational Guidance Quarterly,* 1963, 12, 17–21.

Holland, J. L. Explorations of a theory of vocational choice. Part III: Coping behavior, competencies, and vocational preferences. *Vocational Guidance Quarterly,* 1963, 12, 21–24.

Holland, J. L. Explorations of a theory of vocational choice. Part IV: Vocational daydreams. *Vocational Guidance Quarterly,* 1964, 12, 93–97.

Holland, J. L., & Lutz, S. W. *Predicting a student's vocational choice.* Iowa City: ACT Research Reports, ACT Program.

Holland, J. L., & Whitney, D. R. Career development. *Review of Educational Research,* 1969, 39(2), 227–237.

Ivey, A. E., & Morrill, W. H. Career process: A new concept for vocational behavior. *Personnel and Guidance Journal,* 1968, 46, 644–649.

Lockwood, O. Smith, D., & Trezise, R. Four worlds: An approach to occupational guidance. *Personnel and Guidance Journal,* 1968, 46, 641–643.

McDaniels, C. Youth: Too young to choose? *Vocational Guidance Quarterly,* 1968, 14, 242–249.

Miskimins, R. W. Person-placement congruence: A framework for vocational counselors. *Personnel and Guidance Journal,* 1969, 47, 789–793.

Murphy, G. New approaches to counseling girls in the 1960's. A report of the Midwest Regional Pilot Conference. Washington, D.C.: Office of Education, 1966. (ED 014 576; MF — $0.50; HC — $4.90)

Myers, R. A. Research in counseling psychology — 1964. *Journal of Counseling Psychology,* 1966, 13, 371–379.

New York State Education Department. Proceedings of second annual Conference of Occupational Guidance Personnel. Albany: NYSED, 1967. (ED 023 115; MF — $0.50; HC — $5.55)

O'Hara, R. P. A theoretical foundation for the use of occupational information in guidance. *Personnel and Guidance Journal,* 1967, 46, 636–640.

Ohio State Department of Education. *The changing years.* Report of the 4th Annual All-Ohio Junior High Guidance Conference, May 1966. Columbus:

OSDE, Division of Guidance and Testing, and Ohio School Counselors Association.

Osyian, S. H., Ashby, J. D., & Wall, H. W. Personality types and vocational choice: A test of Holland's theory. *Personnel and Guidance Journal*, 1966, 45, 37–46.

Patterson, C. H. Counseling: Vocational or therapeutic. *Vocational Guidance Quarterly*, 1966, 15, 61–65.

Perrone, P. A. Vocational development. *Review of Educational Research*, 1966, 36, 298–307.

Peters, H. J., & Hansen, J. P. (Eds.) *Vocational guidance and career development: Selected readings*. New York: Macmillan, 1966.

Renick, T. J. Research in career choice. *Research guidelines for high school counselors*. By the Experimental Designs Committee of the Association for Counselor Education and Supervision. New York: College Entrance Examination Board, 1967.

Roeber, E. C. Concepts in career planning. In C. Morehead & F. Rulle (Eds.), *Career planning and development*. Conference report from North Carolina State Department of Public Instruction. Raleigh: Department of Guidance Services, June 1965.

Roeber, E. C. The school curriculum and vocational development. *Vocational Guidance Quarterly*, 1966, 14, 87–91.

Ryan, C. W. Innovations in career development. *American Vocational Journal*, 1969, 44(3), 63.

Salzer, R. C. In defense of vocational guidance. *Vocational Guidance Quarterly*, 1964, 13, 66–69.

Samler, J. Psycho-social aspects of work: A critique of occupational information. *Personnel and Guidance Journal*, 1961, 39, 458–465.

Samler, J. Beyond anxiety: An extended commitment. *Vocational Guidance Quarterly*, 1965, 14, 83–86.

Samler, J. A new psychological specialty: Vocational counseling. *Vocational Guidance Quarterly*, 1966, 15, 82–89.

Samler, J. The counselor in our time. *Rehabilitation Counseling Bulletin*, 1968, 11(3-SP).

Schnack, D. J., & Hopfengardner, J. D. *Report of the vocational guidance seminars*. Columbus: Ohio State Department of Education, Division of Guidance and Testing, 1966.

Schreiber, D. (Ed.) *Guidance and the school dropout*. Washington, D.C.: American Personnel and Guidance Association, 1964.

Segal, S., & Tiedeman, D. V. The case for delay in college entry: High school seniors need time, guidance in identity search. *The School Counselor*, 1968, 15, 167–171.

Shertzer, B., Dye, A., & Walsh, R. Reactions to the Wrenn, Conant and APGA guidance recommendations. *Vocational Guidance Quarterly*, 1965, 14, 92–96.

Stewart, J. A. Vocational choice theories — Helps and hazards for practitioners. *The School Counselor*, 1969, 16, 103–107.

Super, D. E. A developmental approach to vocational guidance: Recent theory and result. *Vocational Guidance Quarterly*, 1964, 13, 1–10.

Thompson, J. M. Career development in the elementary school: Rationale and implications for elementary school counselors. *The School Counselor*, 1969, 16, 208–209.

Thoresen, C., & Mehrens, W. Decision theory and vocational counseling: Important concepts and questions. *Personnel and Guidance Journal*, 1967, 46, 165–172.

U.S. Department of Health, Education, and Welfare. *Commitment to youth.* A report on 5 years progress in guidance, counseling and testing. Washington, D.C.: U.S. Government Printing Office, 1964.

Vocational Education Act of 1963. Public Law 88–210, 88th Congress, H.R. 4955, December 18, 1963.

Williamson, E. G. The denial of vocational guidance. *Vocational Guidance Quarterly*, 1964, 13, 11–17.

Williamson, E. G. Youth's dilemma: To be or to become. *Personnel and Guidance Journal*, 1967, 46, 173–177.

Wolfbein, S. T. Labor trends, manpower, and automation. In H. Borow (Ed.), *Man in a world at work*. Boston: Houghton Mifflin, 1964. Pp. 155–173.

Wolfbein, S. T. *Occupational information: A career guidance view*. New York: Random House Studies in Education, 1968.

Wurz, R. E. Vocational development: Theory and practice. *Vocational Guidance Quarterly*, 1966, 15, 127–130.

Zytowski, D. Toward a theory of career development for women. *Personnel and Guidance Journal*, 1968, 47, 660–664.

Chapter II

Abe, C., Holland, J., Lutz, S., & Richards, J. M. *A description of American college freshmen*. Research Report No. 1. Iowa City: American College Testing Program, 1968. (ED 014 741; MF — $0.50; HC — $3.50)

American Vocational Association. *Lyndon B. Johnson's visit to Crossland High School, Camp Springs, Maryland, April 27, 1967*. Washington, D.C.: AVA.

Anderson, C. M. *Project 13*. Minneapolis Public Schools, 1966. (ED 010 779; MF — $0.25; HC — $0.75)

Andros, G. C. *Self-administering vocational information system. Utilization of Project Talent test materials in SAVIS*. Charleston, West Virginia: Appalachia Educational Laboratory.

Arbuckle, D. S. Occupational information in the elementary school. *Vocational Guidance Quarterly*, 1963, 13, 77–84.

Aster, J. K. Work group conference, vocational guidance component of the educational cooperative. Charleston, West Virginia: Appalachia Educational Laboratory.

Astin, H. S. Patterns of career choices over time. *Personnel and Guidance Journal*, 1967, 45, 541–546.

Bank, I. M. Children explore careerland through vocational role-models. *Vocational Guidance Quarterly*, 1968, 17, 284–289.

Bollum, J. E. Counseling and guidance research — A study of the utility of guidance services rendered at Alden High School to post high school educational-vocational satisfaction. August 1966.

Bottoms, G. Occupational guidance, counseling, and job placement for junior high and secondary school youth. National Conference on Exemplary Programs and Projects, Atlanta, Georgia, March 12–14, 1969.

Briggs, W. T., & Hummel, D. L. *Counseling minority group youth: Developing the experience of equality through education.* Columbus: The Ohio Civil Rights Commission, 1962.

Brophy, A. L. Guidance on military alternatives: An ethical dilemma. *Vocational Guidance Quarterly,* 1964, 13, 31–36.

Broward County Public Schools. *Career development in the secondary schools.* Fort Lauderdale, Florida: BCPS, 1966.

Byrn, Delmont. *Career Decisions.* Washington, D.C. National Vocational Guidance Association, 1969.

Campbell, E. A. Career guidance — An integrated program. *Industrial Arts Vocational Education,* 1969, 58(3), 112.

College Entrance Examination Board. *From high school to college.* Readings for counselors. Papers presented at the Work Conference on Guidance for School-College Transition, Columbia University, New York, August 1964.

College Entrance Examination Board. *Educational information and guidance: A Selected bibliography.* New York: CEEB, 1966.

Counseling (Reprints of selected articles on counseling). *Employment Service Review.* Washington, D.C.: Bureau of Employment Security, December 1966.

Counseling girls toward new perspectives. Report of a Middle Atlantic Regional Conference, Philadelphia. Washington, D.C.: U.S. Government Printing Office, 1965.

Culhane, M. M. The general aptitude test battery: Its availability and use. *Vocational Guidance Quarterly,* 1964, 13, 63– 65.

Drechsel, L. G. A followup study of an entire tenth grade class with implications for improved guidance and counseling. Unpublished manuscript, University of Michigan, Ann Arbor, 1962.

Dugan, W. E. The school counselor's role in vocational guidance. *Minnesota Guidance Bulletin,* Spring 1965, 5–7.

Eckerson, A. B. The new dictionary of occupational titles. *Vocational Guidance Quarterly,* 1963, 12, 40–42.

Fantani, M. D., & Cangemi, J. P. The Madison Area Project. Syracuse, New York: Syracuse City School District, 1963. (ED 001 663; MF — $0.25; HC — $0.60)

Faust, H. *Motivation through guidance in elementary school.* Unpublished manuscript, Philadelphia, 1967.

Fedder, R. *Guidance in the homeroom.* New York: Teachers College Press, 1967.

Fitzgerald, P. W., & Perry, W. F. Operation Dilemma. *Vocational Guidance Quarterly,* 1963, 12, 104–106.

Frericks, D. J. A summary of three surveys of student interest in and attitude toward their school. Columbus: Ohio State Department of Education, Division of Guidance and Testing (no date).

Geller, B. *Team approach to vocational guidance through the curriculum.* Newark, New Jersey: Newark Board of Education, Department of Secondary School Guidance.

Gildar, S. Guidance and the curriculum. *Secondary School Bulletin,* New Jersey

State Department of Education, Division of Curriculum and Instruction, 1966, 23(1).

Glen, E. H., Jr. Adolescent achievement and mobility aspirations. Chapel Hill: University of North Carolina, Institute for Research in Social Science, 1962.

Goldman, L. Information and counseling: A dilemma. *Personnel and Guidance Journal*, 1967, 46, 42–46.

Goodson, S. Occupational information materials in selected elementary and middle schools. *Vocational Guidance Quarterly*, 1968, 17, 128–131.

Gribbons, W. D., & Lohnes, P. R. A five-year study of student educational aspiration. *Vocational Guidance Quarterly*, 1966, 15, 66–70.

Gysbers, N. C. Elements of a model for promoting career development in elementary and junior high school. National Conference on Exemplary Programs and Projects, Atlanta, Georgia, March 12–14, 1969.

Hancock High School Business Department and Guidance Department, Hancock High School class of 1967. Senior occupational interests. Hancock, Maryland: HHSBDGD, 1967.

Harnak, Richard. Technology for Children Project. New Jersey Department of Education, Trenton, October, 1969.

Hechlik, J. E., & Lee, J. L. *Small group and group dynamics*. CAPS Current Resource Series. Ann Arbor, Michigan: ERIC Counseling and Personnel Services Information Center, 1968. (ED 017 037; MF — $0.50; HC — $5.05)

Herr, E. L. Guidance of the college bound. *Personnel and Guidance Journal*, 1966, 45, 47–52.

Herr, E. L. Cooperation between teachers and guidance personnel. *National Business Education Quarterly*, 1968, 37(2), 35–46.

Hollis, J. W. and Hollis, L. U. *Personalizing information processes*. Educational, occupational, and personal-social. New York: The Macmillan Company, 1969.

Hopfengardner, J. D., & Reed, H. R. Focus on youth: Counselor-libraran cooperation. *Ohio Guidance News and Views*, March–April 1967.

Hoppock, R. Best books of 1967 on vocational guidance. *National Association of Secondary School Principals Bulletin*, 1968, 52(326), 121–126.

Hoppock, R. Guidance fifty years ago. *Vocational Guidance Quarterly*, 1967, 16, 130–133.

Hoyt, K. B. The specialty-oriented student research program: A five year report. *Vocational Guidance Quarterly*, 1967, 16, 169–176.

Hughes, R. G. See for yourself: A doing approach to vocational guidance. *Vocational Guidance Quarterly*, 1964, 13, 283–286.

Isaacson, L. *Career information in counseling and teaching*. Boston: Allyn & Bacon, 1966. (Second Edition in Press)

Johnson, R. G., & Johnson, W. F. A brief history of vocational guidance. *National Business Education Quarterly*, 1968, 37(2), 13–21.

Jones, A. M. *Vocational orientation toward a rewarding life*. New York, 1965.

Joslin, L. C. *Careers in the space age*. Guidance symposium, University of Alabama, University, May–June 1966.

Kaback, G. Occupational information in elementary education: What counselors do — What counselors would like to do. *Vocational Guidance Quarterly*, 1968, 16, 203–206.

Kirk, B. A., & Michels, M. E. *Occupational information in counseling: Use and classification.* Berkeley, California: Consulting Psychologists Press, 1964.

Knox, C. K. Student involvement in an expanded vocational guidance program. *The School Counselor,* 1969, 16, 202–204.

Kogen, W. *Developmental program in vocational guidance.* Development of a vocational information center to aid in job placement for employment bound youth. Trenton, New Jersey: State Department of Education, Division of Vocational Education.

Krasnow, B. S. Occupational information as a factor in the high school curriculum chosen by ninth grade boys. *The School Counselor,* 1968, 15, 275–280.

Krause, D. M. Metcalf Junior High School's occupational information unit. *Minnesota Guidance Bulletin,* Autumn 1968–69, 13–14.

Krumboltz, J. D., Thoresen, C. E., & Hosford, R. E. A study to determine how counseling procedures can be used to help students make decisions and plan more effectively. Stanford University, Palo Alto, 1966. (ED 010 185; MF — $0.50; HC — $6.40)

Kuder, G. F. The occupational interest survey. *Personnel and Guidance Journal,* 1966, 45, 72–77.

Latchaw T. T. *Audio-visual guidance materials.* St. Paul: Minnesota State Department of Education, 1970.

Leonard, R. S. Vocational guidance in junior high: One school's answer. *Vocational Guidance Quarterly,* 1968, 17, 221–222.

Leubling, H. E. Counseling with dropouts: A three-year study. *Vocational Guidance Quarterly,* 1967, 15, 173–180.

Litzinger, W., & Wisser, C. Closing the vocational realities gap. *Personnel and Guidance Journal,* 1968, 46(7), 650–654.

Martinson, R. A. *Special programs for gifted pupils.* Sacramento: California State Printing Office, 1962.

Mason City Schools. Summary of program development and research on the academically talented student. Mason County, West Virginia, 1962. (ED .001 279; MF — $0.25; HC — $1.20)

Mezzano, J. A survey of the teaching of occupations. *Vocational Guidance Quarterly,* 1968, 17 275–277.

Minnesota guidance research and project summaries. Minnesota State Department of Education, Counselors Association and Pupil Personnel Services Section, St. Paul, 1968.

Minnesota State Department of Education. *What about foreign languages.* St. Paul: MSDE (no date).

Mitchell, F. H. Implementing a vocational guidance program. *The School Counselor,* 1968, 15, 223–227.

Mitchell, J. Girls need vocational counseling too. *The School Counselor,* 1969, 16, 143–145.

NVGA Commission on Vocational Materials for Elementary Schools. *Assisting Vocational Development in the Elementary School.* Washington, D.C.: APGA, 1969.

Needham, J., Stodola, Q., & Brown, D. F. Improving test interpretation through films. *Vocational Guidance Quarterly,* 1963, 12, 141–144.

Nelson, R. C. Elementary school counseling with unstructured play media. *Personnel and Guidance Journal,* 1966, 54, 24–27.

Norman, R. P. The use of preliminary information in vocational counseling. *Personnel and Guidance Journal*, 1969, 47, 693–697.

Norris, W. *Occupational information in the elementary school.* Chicago: Science Research Associates, 1963.

Nunalee, T. H., & Drabick, L. W. Occupational desires and expectations of North Carolina high school seniors. Raleigh: North Carolina State University, 1965. (ED 011 925; MF — $0.25; HC — $2.90)

Odle, S. G. The student information center as an educational resource. *Vocational Guidance Quarterly*, 1967, 15, 217–220.

Ohio School Counselors Association and Ohio Music Association. What is best for the student? Pamphlet (no date).

Ohio State Department of Education. *Elementary guidance in Ohio.* A compilation of project abstracts. Columbus: OSDE, Division of Guidance and Testing, 1966.

Ohio State Department of Education. Ohio's educational program. *Ohio Guidance News and Views*, January–February 1967.

Ohlsen, M. M. Responsibilities of the elementary school counselor. Springfield, Illinois, 1966. (ED 010 887; MF — $0.25; HC — $0.75)

Overs, R. P. The general pattern: A sociological analysis of vocational counseling. *Vocational Guidance Quarterly*, 1964, 12, 159–162.

Overs, R. P. The physician as a model: A sociological analysis of vocational counseling. *Vocational Guidance Quarterly*, 1964, 12, 237–245.

Overs, R. P. Covert occupational information. *Vocational Guidance Quarterly*, 1967, 16, 7–12.

Peterson, P. G. The class of 1984 — Where is it going? National Conference of State Legislators, Washington, D.C., December 1966.

Pinellas County Board of Public Instruction. *Which way is up?* Clearwater, Florida: PCBPI, Adult Guidance Center.

Poehlman, C. H. Suggested techniques in guidance and counseling with Indian youth and adults. Carson City: Nevada State Department of Education, 1966. (ED 010 750; MF — $0.25; HC — $1.05)

Poppel, N. Summer activities for students. *Vocational Guidance Quarterly*, 1963, 12, 99–103.

Poppel, N. Vocational planning session: A suggested approach. *Vocational Guidance Quarterly*, 1963, 12, 57–60.

Reilley, R. R. Availability and usefulness of occupational materials. *Clearing House*, 1969, 43, 439–441.

Saterstrom, M. H., & Steph, J. A. *Educators' guide to free guidance materials.* (6th ed.) Randolph, Wisconsin: Educators' Progress Service, 1967.

Scherini, R., & Keib, B. Keeping current on occupational information. *Vocational Guidance Quarterly*, 1963, 11, 96–98.

Schmeding, R. W. The use of the playback in the counseling situation. *Vocational Guidance Quarterly*, 1962, 11, 64–67.

Schreiber, D., & Kaplan, B. A. *Guidance and the school dropout.* Washington, D.C.: National Education Association, 1964.

Segel, D., & Ruble, R. A. The Lincoln Project: A study of the educational program of a junior high school in a transitional neighborhood. A report of the Lincoln Guidance Research Project. Albuquerque Public Schools, New Mexico, 1962. (ED 023 494; MF — $0.25; HC — $2.30)

Shellgrove, C. E. J. The effects of counselor reinforcement on a student's negative response. September 1966. (ED 010 437; MF — $0.25; HC — $2.90)

Shertzer, B., & Greenberg, A. S. Guidance implication of the Conant Report on the junior high school. *Vocational Guidance Quarterly*, 1962, 11, 43–46.

Shertzer, B., & Pruett, R. F. *Guidance in elementary schools*. Indianapolis: Indiana Department of Public Instruction, 1961. (ED 001 338; MF — $0.25; HC — $2.50)

Shertzer, B., & Stone, S. C. Junior high school guidance: Problems and potentialities. *Vocational Guidance Quarterly*, 1964, 12, 255–260.

Sinick, D., & Hoppock, R. Research across the nation on the teaching of occupations. *Vocational Guidance Quarterly*, 1961, 10, 21–25.

Slocum, W. L., & Bowles, R. T. Attractiveness of occupations to high school students. *Personnel and Guidance Journal*, 1967, 46, 754–776.

Slotkin, H. New programs for dropouts in New York City: A coordinated approach. *Vocational Guidance Quarterly*, 1962, 10, 235–239.

Slotkin, H. New programs for dropouts. *Vocational Guidance Quarterly*, 1963, 12, 127–132.

Smith, W. R., & Houston, G. C. The prep club program: A progress report. *Vocational Guidance Quarterly*, 1964, 12, 247–254.

Spieler, F. R., & Biancoviso, A. N. The one hundred hour challenge. *Vocational Guidance Quarterly*, 1967, 16, 26–30.

Swan, R. J. (Ed.) *NVGA bibliography of current career information*. 1969 edition. Washington, D.C.: American Personnel and Guidance Association, 1969.

Sweeney, T. J. *A developmental program for vocational counseling directed toward serving disadvantaged youth more effectively*. University of South Carolina, Columbia, School of Education, Grant No. OEG-5-85-091, 1966. (ED 010 074; MF — $0.50; HC — $3.40)

Tamminen, A. W., & Miller, G. D. *Guidance programs and their impact on students*. St. Paul: Minnesota State Department of Education, 1968.

Tannenbaum, A. J. *Curriculum development and teacher training for disadvantaged pupils in special classes (career guidance) in regular junior high school*. New York: Center for Urban Education. (ED 011 022; MF — $0.50; HC — $3.50)

Tennyson, W. W., & Monnens, L. P. The world of work through elementary readers. *Vocational Guidance Quarterly*, 1963, 12, 85–88.

Thomburg, D. Useful and rewarding line of work for physically handicapped young men and women. *Ohio Guidance News and Views*, March–April 1967.

Thoroman, E. C. *The vocational counseling of adults and young adults*. Boston: Houghton Mifflin, 1968.

Van Hoose, W. H., & Leonard, G. E. Vocational guidance in the elementary school. *Guidance Journal*, 1966, 5, 61–64.

Walton, C., & Miller, J. C. A vocational guidance council. *Vocational Guidance Quarterly*, 1967, 16, 198–202.

Weals, R., & Johnson, E. Doubled and vulnerable: A sociodrama on vocational decision making. *Vocational Guidance Quarterly*, 1969, 17, 198–205.

Wellman, F. E. Dimensions of vocational counseling. Missouri University, Columbia, 1966. (ED 011 615; MF — $1.50; HC — $19.65)

Westervelt, E. M. Womanpower — Wanton waste or wishful thinking? *Vocational Guidance Quarterly*, 1962, 10, 78–83.

Whitfield, E. A. Vocational guidance in the elementary school — Integration or fragmentation. *The School Counselor*, 1969, 16, 90–93.

Will, H. R. The role of the high school teacher in counseling. *National Business Education Quarterly*, 1968, 37(2), 27–34.

Working, R. A., & Young, E. *Meeting guidance needs of educationally disadvantaged children within Title I of the Elementary and Secondary Education Act*. Columbus: Ohio State Department of Education, 1967.

Wrightstone, J. W., & McClelland, S. D. Assessment of the demonstration guidance project. New York City Board of Education (no date). (ED 001 752; MF — $0.75; HC — $7.30)

Chapter III

Bergstrom, H. E. Job performance of young workers in relation to school background — A pilot approach toward using the job environment in evaluating both general and vocational education. Sponsored by the Educational Research and Development Council, Minneapolis, 1966. (ED 015 231; MF — $1.00; HC — $10.95)

Bitter, J. A. Training guide for vocational habilitation. St. Louis, Missouri: Jewish Employment and Vocational Service, 1966. (ED 014 187; MF — $0.50; HC — $3.90)

Buckley, L. F. Economics — An interdisciplinary root of guidance. Speech presented at the Eighth Guidance Institute, Fordham University, New York, July 1964.

Burchill, G. W. Work-experience educational programs for secondary youth. National Conference on Exemplary Programs and Projects, Atlanta, Georgia, March 12–14, 1969.

Burt, S. M. The role of the United States Employment Service in the development and dissemination of occupational information. Paper presented at the National Conference on Vocational Guidance, Chicago, May 1967.

Calvert, R., Jr. Peace Corps service and career choice. *Vocational Guidance Quarterly*, 1966, 14, 236–240.

Cassell, F. H. Creating human assets — not liabilities. Washington Workshop Seminar on Labor-Management Relations. American Society for Personnel Administration and the Bureau of National Affairs, Washington, D.C., March 1967.

Cohen, W. J. *Womanpower policies for the 1970's*. Seminar on Manpower Policy and Program, U.S. Department of Labor, Manpower Administration, April 1967.

Cole, B. Jobs now. Speech presented to the Community Relations Service, Department of Justice, Washington, D.C., January 13, 1967.

Eisen, N. B. Work experience education report. Whittier Union High School District, Whittier, California, 1966.

Eisen, N. B. Cooperative education — For whom? Paper presented at the National Conference on Cooperative Vocational Education, Minneapolis, February 1969.

Elder, L. A. An inservice community occupational survey. *Vocational Guidance Quarterly*, 1969, 17, 185–188.

Feldman, M. J. Public education and manpower development. Paper presented at Conference on Curriculum and Teaching in Depressed Areas, Columbia University, New York, June 1967. (Ford Foundation reprint)

Fry, E. A Job Corps center reading program. December 1966. (ED 010 752; MF — $0.25; HC — $1.20)

Geller, B. Project EARN — Employment and rewards now. Newark School District, Newark, New Jersey.

Goldberg, A. J. Training and work opportunities for youth: Federal government approaches to a critical problem. *Vocational Guidance Quarterly*, 1962, 10, 133–136.

Hill, B. M., & Liberman, Jr. Youth Corps counseling. *Vocational Guidance* Quarterly, 1967, 15, 257–261.

Jones, N. Work activity programs for delinquents. *Vocational Guidance Quarterly*, 1964, 13, 45–49.

Kaiser, R. S. Educational and vocational guidance in a summer camp setting. *Vocational Guidance Quarterly*, 1967, 16, 56–58.

Kunze, K. R. An industrial relations view of vocational choice. *Vocational Guidance Quarterly*, 1967, 16, 64–67.

Law, G. Personnel, resource materials and occupational information exchange programs — schools, manpower agencies, industry, and other public and private agencies and organizations. National Conference on Exemplary Programs and Projects, Atlanta, Georgia, March 12–14, 1969.

Levine, L. Implications of the anti-poverty programs for education and employment. *Vocational Guidance Quarterly*, 1965, 14, 8–15.

Los Angeles City Schools. *A guide: A work experience education and employment placement program*. Los Angeles, California, 1969. (ED 001 031; MF — $0.25; HC — $1.85)

McGovern, L., & Hansen, L. S. National Vocational Guidance Week: A postmortem. *Vocational Guidance Quarterly*, 1967, 16, 31–33.

Munger, D. I. The occupational information speakers bureau. *Vocational Guidance Quarterly*, 1967, 15, 265–66.

Ohio State Department of Education. *Guidelines for school and employment service cooperative relationships*. Columbus: OSDE, Division of Guidance and Testing, 1968.

Plans for Progress. Vocational Guidance Institutes 1966. Evaluation. Washington, D.C.: Economic Development Administration, 1966. (ED 022 218; MF — $0.75; HC — $8.25)

Richards, K. M., & Miller, W. R. Industrial work experience for school counselors — The Akron plan. *Ohio Guidance News and Views*, January-February 1967.

Rossmann, J. E., & Prebonich, E. M. School counselor employment service relations: Minnesota report. *Vocational Guidance Quarterly*, 1968, 16, 258–263.

Stambler, H. The Bureau of Labor Statistics' role in occupational information. Speech presented at the National Conference on Occupational Information in Vocational Guidance, Chicago, May 1967.

Washington County Board of Education. Career information in-service education program. A cooperative effort with the Washington County branch of the

Maryland Department of Employment Security and some local industries. Hagerstown, Maryland: WCBE, Department of Guidance and Research, 1966–67.

Wayne State University. Project Pit; A summer industrial work experience and occupational guidance program. Detroit: WSU, Department of Industrial Education, 1967. (ED 024 755; MF — $0.25; HC — $1.85)

Wolfman, E. F., Jr. A medical careers day conference. *Vocational Guidance Quarterly*, 1961, 9, 217–219.

Chapter IV

Bohn, M. J., Jr., & Super, D. E. The computer in counseling and guidance programs. *Educational Technology*, 1969, 9(3), 29–31.

Brickman, W. W., & Lehrer, S. *Automation, education and human values*. New York: School and Society Books, 1966.

Circle, D. F. The career information service. A guide to its development and use. Boston: Massachusetts State Department of Education, 1968. (ED 021 300; MF — $1.75; HC — $20.90)

Cooley, W. W. Computer system for guidance. Paper presented at the meeting of the American Educational Research Association, Chicago, February 1968.

Counseling Technology. Special issue of *Educational Technology*, 9(3), 1969.

Counselors study computer utilization. *New Dimensions in education*. Secondary Education Newsletter, University of Minnesota, Minneapolis, Spring 1967.

Diebold, J. Automation: Its implication for counseling. *Vocational Guidance Quarterly*, 1962, 11, 11-14.

Ellis, A. B., & Tiedeman, D. Can a machine counsel? Information System for Vocational Decisions. Cambridge, Massachusetts: Harvard University, Graduate School of Education, 1968.

Higgen, E. L., & Brown, D. Motion pictures, a source of vocational information. *Vocational Guidance Quarterly*, 1963, 12, 68–71.

Hitchcock, A. A. Report of a study of "A planning manual for the national new career center." Unpublished manuscript, State University of New York at Albany, 1968.

Hutchinson, T. E. Levels of aspiration and models applicable to the problem of choice of career. Technical Memorandum 3. Cambridge, Massachusetts: Harvard University, Information System for Vocational Decisions. (ED 015 494; MF — $0.25; HC — $1.95)

Impellitteri, J. T. Computer assisted occupational guidance. Unpublished manuscript, Pennsylvania State University, 1966.

Impellitteri, J. T. Current guidance applications of computers. Unpublished manuscript, Pennsylvania State University, 1967.

In touch with tomorrow. Youth Counselor Conference on Food and Fiber. St. Paul, Minnesota, June 1968.

Johnson, R. G. Difficulty level of simulated vocational problems in encouraging career exploration. (Doctoral dissertation, Stanford University) Ann Arbor, Michigan: University Microfilms, 1967. No. 68–6439.

McCormick, J. N. The case for the computer. *Journal of College Placement*, 1969, 29(4), 44–50.

McQueen, M. New technology can help schools — Developments. Science Research Associates Research Report. Chicago: Science Research Associates, 1967.

McQueen, M. New technology can help schools — Discussion and suggestions. Minneapolis Public Schools. World of work grade nine. Teacher's guide for the school year, 1967–68. Instructional Television Center, Minneapolis, 1967. Science Research Associates Research Report. Chicago: Science Research Associates, 1967.

Nelson, D. E. Behavior assessment and modification in the prescriptive phase of a comprehensive educational planning system. Paper presented at annual meeting of American Psychological Association, Washington, D.C., September 2, 1969.

Olsen, L. C., & Venema, W. H. Development of a projective technique for obtaining educationally useful information indicating pupils' attitudes toward work and educational plans. Report No. 21. Pullman: Washington State University, Department of Education, 1968. (ED 022 960; MF — $0.25; HC — $1.90)

Perrone, P. A., Thrush, R. S. Vocational information processing systems: A survey. *Vocational Guidance Quarterly*, 1969, 17, 255–266.

Quirk, T. J. The use of twelfth grade TALENT data to predict occupational activities five years after high school graduation. Paper presented at annual meeting of American Psychological Association, Washington, D.C., September 2, 1969.

Reed, H. J. Certain aspects of vocational guidance in a technological age. *Vocational Guidance Quarterly*, 1961, 10, 90–93.

Systems under development for vocational guidance. Report of a Research Exchange Conference. Columbus: Ohio State University, Center for Vocational and Technical Education, 1966. (ED 011 039; MF — $0.50; MC — $3.60)

Tiedeman, D. Can a machine admit an applicant to continuing education? Project Report No. 19. Information System for Vocational Decisions. Cambridge, Massachusetts: Harvard University, Graduate School of Education, 1969.

Tiedeman, D. The cultivation of careers through guidance and vocational education. Project Report No. 18. Information System for Vocational Decisions. Cambridge, Massachusetts: Harvard University, Graduate School of Education, 1969.

Viens, R. G. Group testing via closed-circuit television. *Vocational Guidance Quarterly*, 1963, 11, 80–84.

Walz, G. R., & Rich, J. V. The impact of information systems on counselor preparation and practice. *Counselor Education and Supervision*, 1967, 6 (SP), 275–284.

Chapter V

A guide for the development, implementation, and administration of exemplary programs and projects in vocational education. Georgia Department of Education, Atlanta, Georgia, September, 1969.

Arnold, W. Vocational guidance and vocational education: The common goal. *Vocational Guidance Quarterly*, 1967, 16, 2–6.

Ash, L. C. The expanding role of vocational and technical education. *Counselor Education and Supervision*, 1967, 6, 84–90.

Atlantic City High School. *Developmental program in vocational education.* Exploration of a method of accumulating, evaluating, summarizing, and disseminating vocational guidance information pertinent to local employment opportunities. Atlantic City: New Jersey State Department of Education (no date).

Barnes, W. The vocational core program of Hobbs Municipal Schools. Santa Fe: New Mexico State Department of Education, Research Coordinating Unit, 1967. (ED 011 296; MF — $0.25; HC — $1.10)

Bemis, M., & McClure, W. *Symposium in occupational education, manpower and economic change.* Bloomington, Indiana: Phi Delta Kappa, 1966. (ED 010 127; MF — $0.25; HC — $1.85)

Bottoms, G., & Pelke, M. Needed student personnel services in area vocational-technical schools. *Vocational Guidance Quarterly*, 1966, 15, 101–105.

Bournazos, K. A comparative study of the effects of vocational training on the career patterns of high school graduates. Ann Arbor, Michigan: University Microfilms, 1963.

Brahms, J. A. A proposed guidance program for an area technical-vocational institute. Unpublished manuscript, St. Paul, Minnesota, May 1967.

Briggs, L. J., & Norris, E. L. Techniques for selecting and presenting occupational information to high school students. Planning and development of research programs in selected areas of vocational education. Vol. 1. American Institutes for Research, Palo Alto, California, 1966. (ED 010 623; MF — $0.25; HC — $1.25)

Chase, W. W., Brown, J. W., & Russo, M. *Basic planning guide for vocational and technical education facilities.* Washington, D.C.: U.S. Department of Health, Education, and Welfare, 1965. (ED 018 095; MF — $0.25; HC — $2.15)

Clary, J. R. Attitudes of public school personnel towards the Introduction to Vocations Program in North Carolina. Raleigh: North Carolina State Board of Education, 1967. (ED 011 548; MF — $0.05; HC — $4.45)

DuBato, G. VOGUE: A demonstration system of occupational information. *Vocational Guide Quarterly*, 1968, 17, 117–19.

Dugan, W., & Burkett, L. APGA-AVA relationships: A dialogue. Presented at the National Seminar on Vocational Guidance, Northern Michigan University, Marquette, August 1966.

Fitterman, E., & Blumenthol, R. The development of a work orientation program for home economics related occupations. Ann Arbor, Michigan: University Microfilms, 1966.

Georgia State Department of Education. *Conference on ways the area school personnel worker and the high school counselor can work together.* Sponsored by the Vocational Guidance Unit. Atlanta: GSDE, 1966.

Ginsburg, W. Some comments on national manpower policies. Remarks before the National Conference on Occupational Information in Vocational Guidance, Chicago, May 1967.

Gordon, E. W. Counseling youth who are handicapped by social status differences. Columbia University, New York, 1963.

Green, K. (Ed.) Leadership development seminar vocational technical education. Final Report. University of Maryland, College Park, 1966. (ED 010 629; MF — $0.75; HC — $7.30)

Heltzel, F. B. Motives influencing needs to achieve in vocational education. Ithaca: State University of New York, College of Home Economics, 1966. (ED 010 295; MF — $0.25; HC — $2.45)

Hogard, R. W. *Guidelines for pupil personnel services in area vocational-technical schools in Kansas.* Topeka: Kansas State Board for Vocational Education, 1966.

Instructional Materials Laboratory. *Vocational and technical education for a changing world of work.* Columbus: Ohio State University, Department of Trade and Industrial Education, IML.

James, C. E. *An analysis of the effectiveness of vocational industrial day-teacher preparatory program in Arizona schools.* Arizona State University, Tempe, 1963.

Jiloca, E. L. *Bibliography of studies in occupational education conducted in Minnesota: 1965–67.* Minneapolis: University of Minnesota, Minnesota Research Coordination Unit in Occupational Education.

Kaplan, L. L. *Occupational training centers for 16–18 year-old youth.* A demonstration program for potential or actual dropouts. Los Angeles: Los Angeles City Schools, 1967. (ED 010 620; MF — $0.50; HC — $5.60)

Lassiter, R. A. Vocational rehabilitation programs in public schools. *High School Journal,* 1969, 52, 254–259.

Los Angeles City Schools. A guide: A work experience education and employment program. Los Angeles: LACS, 1960. (ED 001 031; MF — $0.25; MC — $1.85)

Mali, P. Retraining for the unemployed. *Vocational Guidance Quarterly,* 1963, 11, 286–291.

Martin, A. *Occupational-vocational-technical education program.* Occupational-vocational-technical curriculum and guidance. Evaluation Report. Pittsburgh Public Schools, Pittsburgh, 1966.

Martin, G. L. *A study of vocational training for mentally and physically handicapped.* University of Idaho, (no date).

Maumee High School-Penta County Vocational School. Maumee City Schools, Maumee, Ohio (no date).

McArthur, D. W. Manpower from the viewpoint of management. Speech presented at the National Conference on Occupational Information in Vocational Guidance, Chicago, May 1967.

Michigan State Department of Education. *Highlights of vocational education in Michigan.* Lansing: MSDE, Division of Vocational Education, 1967.

Miller, D. B. *A critical analysis of the vocational guidance practices employed by industrial art teachers.* Ann Arbor, Michigan: University Microfilms, 1965.

Minnesota State Department of Education. *Your career opportunities through apprenticeship.* St. Paul: MSDE, 1966.

Mittelholtz, E. Vocational orientation for Indian students. Bemidji, Minnesota: Minnesota Department of Education, Indian Education Unit.

Moley, D. *An investigation and development of the cluster concept as a program in vocational education.* University of Maryland, College Park, 1966. (ED 010 301; MF — $0.75; HC — $6.85)

National Conference on Cooperative Vocational Education. Implications of the 1968 amendments. University of Minnesota, Minneapolis, February 1969.

Norton, R. E. *Using programmed instruction in occupational education*. Albany: New York State Education Department, 1967. (ED 018 660; MF — $0.25; HC — $2.90)

Odgers, J. Job placement — Whose responsibility? *Ohio Guidance News and Views*, 1968, 18(3).

Petry, D. W. *Vocational students' perception of guidance needs: a study conducted in Minnesota Area Vocational-Technical Schools*. St. Paul, Minnesota: Minnesota Department of Education, 1969.

Reed, H. J. Training opportunities other than four-year college. *Vocational Guidance Quarterly*, 1965, 14, 16–20.

Report of the proceedings. National Conference on Education of the Disadvantaged, Washington, D.C., July 1966.

Review of the workshop for area vocational-technical center counselors and student personnel directors. Winter Park, Florida, October 1966.

Robertson, Von H. (Ed.) *Career counseling*. 1968 yearbook. American Vocational Association, Trade and Industrial Division. Chicago: American Technical Society, 1968.

Schroeder, B. M. The Detroit job up-grading program. *Vocational Guidance Quarterly*, 1961, 10, 53–54.

Simmer, C. J. Graphic arts curricula, the partnership approach. *Vocatio*, 1967, 1(1), 39–42.

Special School District of St. Louis County. *Vocational-technical education counselor handbook*. Rock Hill, Missouri, November 1966.

Unified School District #368. *Paola project in vocational education*. Interdisciplinary vocational education. Paola High School, Paola, Kansas (no date).

U.S. Department of Labor. *Apprenticeship past and present*. (Rev. ed.) Washington, D.C.: Bureau of Apprenticeship and Training, 1964.

U.S. Department of Labor. *Joint apprenticeship and training committees* (JATC) handbook. Washington, D.C.: Bureau of Apprenticeship and Training, 1962.

U.S. Department of Labor. *The national apprenticeship program*. Washington, D.C.: U.S. Government Printing Office, 1966.

U.S. Department of Labor. *Setting up an apprenticeship program*. Washington, D.C.: Bureau of Apprenticeship and Training, 1966.

U.S. Department of Labor. *Counselor's guide to manpower and other occupational information*. Washington, D.C.: U.S. overnment Printing Office, 1967.

U.S. Department of Labor. *Manpower report of the President*. Washington, D.C.: U.S. Government Printing Office, 1969.

Van Hall, M. E. Conference on methods of increasing student achievement in technical preparatory programs. Alfred: State University of New York, Agriculture and Technical College, 1966. (ED 010 075; MF — $0.25; HC — $0.80)

Walters, H. F., & Zinger, W. Guidance personnel in area vocational-technical schools. *Vocational Guidance Quarterly*, 1966, 14, 278–282.

Washington County Board of Education. Aviation education workshop. Hagerstown, Maryland: WCBE, 1967.

Wenrich, R. C., & Ollenburger, A. *High school principals' perceptions of as-*

sistance needed in order to develop more adequate programs for employment-bound youth. Ann Arbor: University of Michigan, Office of Research Administration, 1963. (ED 011 282; MF — $0.25; HC — $2.70)

Who will counsel the vocational student? *American Vocational Journal*, 1966, 41(7SP).

Wolfbein, S. L. The role of counseling and training in the war on unemployment and poverty. *Vocational Guidance Quarterly*, 1964, 13, 50–52.

Workshop on student personnel services relating to vocational-technical education. University of South Florida, Tampa, August 1967.

Chapter VI

Bennis, W. G.; Benne, K. D.; and Chin, R. *The planning of change*. New York: Holt Rinehart and Winston, Inc., 1969 (Second Edition).

Bergstein, H. B. The parent and the school counselor: An emerging relationship. *Vocational Guidance Quarterly*, 1965, 13, 243–247.

Borow, H. The future face of counselor education: A vocational profile. *New Jersey Guidance News*, 1966, 30(7).

Carlson, R. O.; Gallaher, A. Jr.; Miles, M. B.; Pellegrin, R.; and Rogers, E. M. *Change processes in the public schools*. University of Oregon: The Center for the Advanced Study of Educational Administration, 1965.

Crocker, M. I., & Powell, M. Too little and too late. *Vocational Guidance Quarterly*, 1961, 9, 266–267.

Experimental Design Committee of the Association for Counselor Education and Supervision. *Research guidelines for high school counselors*. New York: College Entrance Examination Board, 1967.

Krumboltz, J. D. & Thoresen, C. E. (Eds.) *Behavioral counseling. Cases and techniques*. New York: Holt, Rinehart & Winston, 1969.

Leeper, R. R. (Ed.) *Strategy for curriculum change*. Washington, D.C.: Association for Supervision and Curriculum Development, 1965.

McQueen, M. The changing curriculum. Part I — Rationale for change. Science Research Associates Research Report. Chicago: Science Research Associates, 1966.

McQueen, M. The changing curriculum. Part II — Specific subject fields. Science Research Associates Research Report. Chicago: Science Research Associates, 1966.

McQueen, M. Flexible scheduling and individual differences. Analysis and recommendations. Science Research Associates Research Report. Chicago: Science Research Associates, 1966.

Mitchell, H. E. Counselor institute and followup workshops. Final Report. University of Pennsylvania, Philadelphia, Grant No. OEG-6-85-008, 1965. (ED 010 281; MF — $0.50; HC — $6.25)

Perrone, P. A. *A national school counselor evaluation of occupational information*. Madison: University of Wisconsin, Center for Studies in Vocational and Technical Education, Industrial Relations Research Institute, 1968. (ED 019 717; MF — $0.25; HC — $1.70)

Spinelli, G. L. Vocational guidance preparation for teachers. *National Business Education Quarterly*, 1968, 37(2), 22–26.

Stiller, A. (Ed) *School counseling, 1967: A view from within*. Washington, D.C.: American Personnel and Guidance Association, 1967.

Strong, M. E. National Conference on Occupational Information in Vocational Guidance. Chicago, May 1967.

Wellman, F. E. Training institute for vocational guidance and counseling personnel. Missouri University, Columbia, Grant No. OEG-3-6-06-2212-0726, 1966. (ED 011 614; MF — $0.50; HC — $5.45)

Practical Resource Materials: A Selected List

American Guidance Services, Inc. Materials for implementing upper elementary guidance. *The people around us* (5th grade) and *Seeing ourselves* (6th grade). Publishers' Building, Circle Pines, Minnesota.

ASK. Admissions Search Kit. 3M Company, St. Paul, Minn., and Association of College Admissions Counselors, Evanston, Illinois.

Beam, H. E. and Clary, J. R. *Introduction to vocations* (Revised). North Carolina Department of Public Instruction, Raleigh, North Carolina, 1968.

B'nai B'rith Vocational Service. *Counselor's check-up list*. Washington, D.C.: B'nai B'rith National Office, 1966.

B'nai B'rith Vocational Service. *1969 Catalog*. Washington, D.C.: B'nai B'rith National Office.

Boy Scouts of America. *Exploring and the future of America*. Special edition on Explorer program.

But still alive. Some pertinent facts recent researchers missed concerning clerical women workers 35 and older. Cleveland, Ohio: Occupational Planning Committee, Cleveland Welfare Federation and Women's Advertising Club.

Byrn, Delmont. *Career Decisions*. National Vocational Guidance Association, 1969.

Careers Today. Charter Issue. Also January, February, March 1969. Del Mar, California 92014.

Chamber of Commerce of the United States. *How to plan career conferences for teen-agers*. Washington, D.C.: CCUS.

Chronicle Guidance Publications, Inc. Occupational-educational-professional information. Chronicle's 3-in-1 guidance service. Moravia, New York: CGP.

College Choice Incorporated, P.O. Box 172, Belmont, Massachusetts 02178.

College Entrance Examination Board. *Student handbook of selected colleges*. Experimental model. Princeton, New Jersey: Educational Testing Service, 1967.

College Entrance Viewdeck. Moravia, New York: Chronicle Guidance Publications, 1968.

College Occupational Exploration Kit. (Occuspan) Chicago: Science Research Associates, 1967.

Comparative college guide service. Harper and Row, Publishers, Inc., 51 East 33rd Street, New York, New York 10016.

Crespy, M., & Malmquist, J. *The world of work: Increasing the vocational awareness of fifth and sixth grade pupils*. Trenton: New Jersey State Department of Education, 1967.

Darcy, Robert L. and Powell, Phillip E. *Manpower and Economic Education*. Joint Council on Economic Education, New York, 1968.

Dietz, B. W. *You can work in the education services.* New York: John Day Co., 1969.

Dietz, B. W. *You can work in the health services.* New York: John Day Co., 1969.

Educational Testing Service. *Tests and measurement kit.* Princeton, New Jersey: ETS, 1965.

Florida State Department of Education. *Occupational information for Florida schools.* Bulletin 70M-1, May 1967. Tallahassee, Florida: FSDE.

Follette, Maurice L. Career fair cookbook. Mimeographed paper. Tabor, Iowa.

General Electric. General Electric's answer to 4 why's. Schenectady, New York; GE, Educational Publications.

Georgia State Department of Education. Developing a program of student personnel services for area vocational-technical schools. Atlanta: GSDE, Department of Vocational Education.

Guidance free film selector. 561 Hillgrove Avenue, LaGrange, Illinois.

Haldeman, Hoffman, Moore, & Thomas. *Finding your orbit.* Moravia, New York: Chronicle Guidance Publications, 1966.

Hudson, M. W., & Weaver, A. A. I want a job. (Overhead transparencies for for use with junior and senior high school students, retardates in a terminal program, in guidance and with adult groups.) Eye Gate, 146-01 Archer Avenue, Jamaica, New York 11435, 1964.

Job interview: Three young men. Churchill Films, 622 N. Robertson, Los Angeles, California.

Job interview: Three young women. Churchill Films, 622 N. Robertson, Los Angeles, California.

John Hancock Mutual Life Insurance Company. *Your child's future.* Boston, Massachusetts: JHMLIC, 1966.

Kansas State Department of Public Instruction. *Kansas handbook of post-high school educational opportunities.* Topeka, Kansas: KSDPI, 1966.

Knapp, D. L., & Bedford, J. *The parent's role in career development.* Washington, D.C.: National Vocational Guidance Association, 1967.

Kunze, K. R. Industry resources available to counselors. In Proceedings of the National Seminar on Vocational Guidance, University of Missouri, Columbia, August 1967.

Latchaw, T. T. *Audio-Visual guidance materials.* St. Paul, Minnesota State Department of Education, 1970.

Librarians and counselors work together for an effective guidance program in the school. Washington, D.C.: American School Counselor Association and American Association of School Librarians, 1964.

Lish, G. (Ed.) *A man's work.* An information motivation system in vocational guidance. (100 recorded on-the-scene interviews with men talking about their jobs as they work.) New York: McGraw-Hill, 1968.

Martinson, D. W. Exploring the world of work, 7–12. (Educational tapes and records.) H. Wilson Corporation, 555 W. 166th Street, South Holland, Illinois.

Mazel, E. *College at your fingertips, 1968.* (College selection kit.) New York: Macmillan, 1968.

McClenathan, L. *Student guidance in the classroom.* New thinking in guidance programs. Unit one. Chicago: Science Research Associates, 1968.

Minneapolis Public Schools. *World of work grade nine.* Teacher's guide for the school year 1967–68. Minneapolis: MPS, Instructional Television Center, 1967.

Minnesota State Department of Education. Some factual information on selected private vocational schools. St. Paul: MSDE, Private Trade School Unit and Pupil Personnel Services Section.

Minnesota State Department of Education. *Careers with the State of Minnesota.* St. Paul: MSDE, Minnesota Guidance Series, 1964.

Minnesota State Department of Education. *Paramedical training in Minnesota.* St. Paul: MSDE, Minnesota Guidance Series, 1967.

Minnesota State Department of Education. *College information guide, 1968–70.* St. Paul: MSDE, Minnesota Guidance Series, 1968.

Minnesota State Department of Education. *Minnesota's area vocational technical schools*, 1968–69. St. Paul: MSDE, 1968.

Minnesota State Department of Education. *Counseling is . . . .* St. Paul: MSDE, 1969.

Minnesota State Department of Employment Security. *Minnesota's manpower, 1960–75.* St. Paul; MSDES, 1966.

Munson, H. L. *Guidance activities for teachers of social studies.* Guidance activities for secondary school teachers. Chicago: Science Research Associates, 1965.

National Cash Register Company. PCMI microform system. NCR, Guidance Project, Industrial Projects Division, 3100 Valleywood Drive, Dayton, Ohio 45429.

National Vocational Guidance Association. *Assisting vocational development in the elementary school.* Washington, D.C., American Personnel and Guidance Association, 1969.

National Vocational Guidance Association. *Guidelines for preparing and evaluating occupational materials.* Washington, D.C.: American Personnel and Guidance Association, 1964.

Need a speaker? For organizations, clubs, schools, associations. Cleveland, Ohio: Occupational Planning Committee, Welfare Federation of Cleveland, 1001 Huron Road, Room 904, Cleveland, Ohio 44115.

North Carolina State Department of Public Instruction. *Are home economics careers for you?* Raleigh: NCSDPI, Vocational Education Division, Home Economics Education (no date).

Ohio State Department of Education. Business, industry and the school counselor. Columbus: OSDE, Division of Guidance and Testing.

Ohio State Department of Education. *Sources of occupational information.* Columbus: OSDE, Division of Guidance and Testing, 1966.

Ohio State Department of Education. *Ohio vocational education notebook.* Columbus: OSDE, Division of Guidance and Testing, 1967.

Ohio State Department of Education. *School counselor's guide for the General Aptitude Test Battery.* Columbus: OSDE, Division of Guidance and Testing, 1967.

Ohio State Department of Education. *Apprenticeship opportunities in Ohio Appalachian counties.* Columbus: OSDE, Division of Guidance and Testing, 1968.

Ohio State Department of Education. *Ohio apprenticeship notebook for school counselors.* Columbus: OSDE, Division of Guidance and Testing, 1968.

Plans for Progress Council and Merit Employment Council of Greater Los Angeles. *You too can be a winner.* Seminar for Analysis of Employment Problems of Minority Youth, California State College, Los Angeles, June–July 1965.

Smith, D. G. *Career guidance for Louisiana students.* Baton Rouge: Louisiana State Department of Education, Vocational Education Division.

Swan, R. J. (Ed.) *NVGA bibliography of current career information.* (1969 edition).

Teachers' Guides to Television, Inc., Television Information Office, ABC, CBS, and NBC, 745 Fifth Avenue, New York 10022.

U.S. Bureau of Employment Security. *Guide to local occupational information.* (2nd ed.) Washington, D.C.: USBES, 1966.

U.S. Department of Labor. A look at tomorrow's jobs. *1966–67 Occupational outlook handbook.* Occupational Outlook Report Series, Bulletin No. 1450-A. Washington, D.C.: USDL.

U.S. Department of Labor. *Employment service information on manpower needs and employment opportunities.* Washington, D.C.: USDL, Manpower Administration, 1967.

U.S. Department of Labor, Bureau of Apprenticeship and Training. *An employer's guide to on-the-job training under the manpower development and training act.* Washington, D.C.: U.S. Government Printing Office. 1966.

U.S. Office of Economic Opportunity. *Catalog of federal assistance programs.* Washington, D.C.: USEO Information Center, 1967.

U.S. Office of Education. *Economics for young workers.* A suggested course guide for developing economic competencies. Washington, D.C., USOE, 1966.

U.S. Office of Education. Pretechnical post high school program. Washington, D.C.: U.S. Government Printing Office, 1967.

Van Breems, A. (Ed.) *A woman's work.* An annual publication on careers for women. Georgian Lithographers, 1967.

Virginia State Department of Education. *Guidance handbook for Virginia schools.* 47(11), June 1965. Richmond: VSDE, Guidance and Testing Services, 1965.

Vocational scholarships. Financial aids available to students pursuing vocational or technical training at Utah post-secondary schools. State Superintendent of Public Instruction, Utah Research Coordinating Unit for Vocational and Technical Education, 1967.

Wilson Educational Tapes. *Exploring the world of work.* Wilson Corporation, 555 W. 166th Street, South Holland, Illinois 60473.

W.O.W. — World of Work Series. Detroit, Michigan: Edu-Cast, 1968.

You and your job. What is it? Where is it? How to get it. How to keep it. Where do you go from here? (5 booklets for guiding disadvantaged children) Chicago: J. C. Ferguson Publishing Company, 1968.

You and your job. A guide for instructors and counselors. Chicago: J. C. Ferguson Publishing Company, 1968.

Your move to the city. Brochure. St. Paul: Minnesota Congress of Parents and Teachers (no date).

SUBJECT INDEX

Apprenticeships

U.S. Department of Labor. *Apprenticeship past and present.*
U.S. Department of Labor. *Joint apprenticeship and training committees (JATC) handbook.*
U.S. Department of Labor. *The national apprenticeship program.*
U.S. Department of Labor. *Setting up an apprenticeship program.*

Behavioral Counseling

Krumboltz, J. D., & Thoresen. C. E. The effect of behavioral counseling in group and individual settings on information-seeking behavior.
Krumboltz, J. D., & Thoresen, C. E. *Behavioral counseling. Cases and Techniques.*

Bibliographies

Garbin, A. P., Jackson, D. P., & Campbell, R. *Worker adjustment: Youth in transition from school to work.*
Guidance associates. *Guidance catalog.*
Latchaw, T. T. *Audio-visual guidance materials.*
North Carolina State Department of Public Instruction. *Occupational information. A bibliography.*
Ohio State Department of Education. *Sources of occupational information.*
Saterstrom, M. H., & Steph, J. A. *Educators' guide to free guidance materials.*
U.S. Department of Labor. *Counselor's guide to manpower and other occupational information.*

Career Planning

Career planning handbook. University High School, University of Minnesota.
Hansen, L.S. *Career planning unit.*
Hansen, L. S. Theory into practice: A practitioner looks at career guidance in the school curriculum.
Hopkins, C. E. Career exploration via mass media.
Katz, M. R. *You: Today and tomorrow.*
Lewis, D. Opportunity: Goodyear teaches the teachers.
Lothspeich, W. F. Career planning development committee.
Minnesota State Department of Education. *Your career opportunities through apprenticeship.*
A student career exploration project.
Ohio State Department of Education, Division of Guidance and Testing, and Ohio School Counselors Association. Guidance for the exploratory years.

Tennyson, W. W., & Klaurens, M. Behavioral objectives for career development.

Classroom Environment

Miller, J. N. New cure for boredom in the classroom.

Closed Circuit Television

Beachley, C. L. Careers via closed-circuit televison.
Beachley, C. L. A pioneering project. (Utilizing closed circuit television for guidance.)
Beachley, C. L. The use of television in guidance. A case history of the experimental program in Washington County, Maryland.
Beachley, C. L. Using a technological innovation as a catalyst in educational and vocational guidance.
Hopkins, C. E. Career exploration via mass media.
Minneapolis Public Schools. World of work.

College Choice

ASK 3M Company and ACAC
Gelatt, H. B. Information and decision theories applied to college choice and planning.
SEARCH. *College selection by computer.*
College Viewdeck. Chronicle Publications.

Computer Oriented Programs

Cogswell, J. F., Donahoe, C. P., Jr., Estavan, D. P., & Rosenguist, B. A. The design of a man-machine counseling system.
Harris, J. A. Computerization of vocational information.
Impellitteri, J. T. *The development and evaluation of a pilot computer-assisted occupational guidance program.*
Katz, M. System of interactive guidance and information.
Loughary, J. W., Friesen, D., & Hurst, R. Autocoun: A computer-based automated counseling simulation system.
Loughary, J. W., and Tondow, M. GUIDPAK.
McGrail, T. F. Mr. 1307.
Minor, F. J., Meyers, R. A., & Super, D. E. An experimental computer-based educational and career exploration system.
Roberts, T. L. Bartlesville total information guidance support system.
Rochester City School District. Proposal for computer-assisted vocational guidance project.
SEARCH. *College selection by computer.*

Computers

Counselors study computer utilization.
Harris, J. A. A report on the project for computerization of vocational information.
North American Educational Computer Services, Inc. Scholarships by computer.
Perry, D. Educational applications and implications of computer technology.
Tondow, M. Comments on "A computer measurement system for guidance."

Consumer Education

Chamber of Commerce of the United States. *How to plan economic understanding projects.*

Darcy, R. L. & Powell, P. E. *Manpower and economic education.*

Counseling Programs and Services

Green, L. F. *Counseling employment-bound students.*

Katz, M. R. *Decisions and values: A rationale for secondary school guidance.*

Katz, M. R. The name and nature of vocational guidance.

Robertson, Von H. (Ed.) *Career counseling.*

Stiller, A. (Ed.) *School counseling, 1967: A view from within.*

Winefordner, D. W. et al *Suggested model for the full-time counselor who conducts and coordinates an exploratory program in grades 7-9.*

Counselor Characteristics

Hoyt, K. B. The school counselor's self-understanding.

Johnson, J. L. A workshop for secondary school counselors to improve their competencies in working with technically-oriented students.

Counselor Role

Kushel, G. *Discord in teacher-counselor relations.*

Loughary, J. The information explosion and its implications for the counseling function.

Ruff, E. Our job as a counselor.

Counselor Education and Training

Borow, H. The future face of counselor education: a vocational profile.

College Entrance Examination Board. *Preparing school counselors for educational guidance.*

Dunwoody offers course, "Counseling for industrial, trade, and technical occupations."

Gysbers, N. C., & Joslin, L. C. Preparing counselors for vocational guidance.

McDaniel, C. (Ed.) Vocational aspects of counselor education.

Ruff, E. E., & Gold, E. Preparing counselors for developing a maximum range of vocational maneuverability in students.

Curriculum

Gildar, S. Guidance and the curriculum.

Michigan State Department of Education. *A vertically integrated occupational curriculum for schools in Michigan.*

Minnesota State Department of Education. *What about foreign languages?*

National Vocational Guidance Association. *Conference on implementing career development theory and research through the curriculum.*

Curriculum Development

Borow, H. Conjunction of career development and curriculum: problems and potentials.

Foshay, A. W. Strategies for curriculum change.

Tennyson, W. W. & Ashcraft, K. Conference on implementing career development theory and research through the curriculum.

Tennyson, W. W. & Klaurens, M. *Suggested teaching-learning approaches.*

Decision Making

Christenson, T. What happened to the class of 1967, an invitation to making decisions.

Instructional Systems Corporation and Follett Counseling Information Service. *You the decision maker.*

Katz, M. R. A model of guidance for career decision-making.

Magoon, T. M. A model of effective problem solving applied to educational and vocational planning with students.

Tiedeman, D. V., & O'Hara, R. P. *Career development: Choice and adjustment.*

Wilson, E. H. A task oriented course in decision-making.

Yabroff, W. W. *Invitation to decision.*

Developmental Guidance

Leonard, G. E. *Developmental career guidance in action.*

Leonard, G. E. *How to face future success.*

Leonard, G. E., & Vriend, T. J. *1968 Vocational Guidance Institute.*

Oklahoma State Department of Education. *A guide for developmental vocational guidance, grades K-12.*

Educational Change

Allen, D. Educational change: Waves or ripples.

E S '70 News.

Flanagan, J. C. Developing a functioning model of an educational system for the '70's.

Miller, J. N. New cure for boredom in the classroom.

Workshop reveals innovative approaches.

Elementary School Students

Faust, H. Room to grow.

Frank, R. Self awareness through vocational development.

Gambino, T. *Increasing the vocational awareness of fifth and six grade pupils.*

Gordon, A. Career development program.

Stiller, A. Project BEACON.

Employment

Chamber of Commerce of the United States. *Target: Employment.*

Pruitt, A. S. 1967 Workshop on employment problems of Negro high school graduates.

San Diego County Department of Education. *VIEWPOINT — Entry employment in San Diego.*

Federal Legislation

Implications of federal legislation for school counselors.

Vocational Education Act of 1963.

1968 Amendments.

Followup Studies

Christenson, T. What happened to the class of 1967, an invitation to making decisions.

Gysbers, N. C. An evaluation of the seminar using data obtained from a follow-up study of summer participants.

Odgers, J. G. *Follow-up study, 1966 National Seminar on Vocational Guidance.*

Gifted

Drews, E. M. *The creative intellectual style in gifted adolescents. Being and becoming: A cosmic approach to counseling and curriculum.*

Drews, E. M. *The creative intellectual style in gifted adolescents. Motivation to learn: Attitudes, interests and values.*

Drews, E. M. *The creative intellectual style in gifted adolescents. Process and product: A reassessment of students and program.*

Group Guidance

Anderson, A. R., & Johnson, D. L. Using group procedures to improve human relations in the school social system.

DuBato, G. S. A plea for vocational guidance in the schools. Including suggestions for group guidance activities on self-appraisal and careers for grades K through 12.

Instructional Systems Corporation and Follett Counseling Information Service. A systems approach to group guidance.

Yunkers, J. A. Pre-high school vocational group guidance for potential dropouts and non-college-bound students.

Guidance Programs

Career guidance program. University High School, University of Minnesota.

Colorado State Department of Education. Guidance program planning.

Hawaii State Department of Education. Guidance emphasis by grades.

Martin, A. M. A report on the Communications in Guidance Project.

National Vocational Guidance Association. *Newsletter.*

Guidance Services

Grossmont Union High School. Studies in success. A promising approach to the vocational guidance of average high school students.

Hawaii State Department of Education. Secondary school guidance in Hawaii.

Hoppock, R. Guidance fifty years ago.

McDowell, L. C. Where guidance makes a difference.

National Vocational Guidance Association. *Project reconceptualization: Classification of issues involving the nature and status of contemporary vocational guidance.*

Super, D. E. A reconceptualization of vocational guidance.

Tennyson, W. W. Guidelines for practice.

Information Centers

Banister, R. E. San Diego's career information center.

DuBato, G. S. A feasibility study to investigate the structure and operation of a model occupational information dissemination unit which would operate between the New York Employment Service and the New York State Education Department.

Pierson, G. N., Hoover, R., & Whitfield, E. A. A regional career information center: Development and process.
Samuelson, L., & Edelson, A. Career information center.

Information Processing

Cook, H. E. *Occupational information materials.* Progress Report No. 1.
Cook, H. E. *Occupational information materials.* Progress Report No. 2.
Cook, H. E. *Occupational information materials.* Progress Report No. 3.
Cook, H. E. *Occupational information materials.* Progress Report No. 4.
Cook, H. E. Selected bibliography of occupational literature in libraries in nine Atlanta public elementary schools.

Information Systems

Andros, G. C. *Self-administering vocational information system. Development of the self-component.*
Andros, G. C. *Self-administering vocational information system. Procedure for the development of the unit — the biological-medical field.*
Banister, R. E. San Diego's career information center.
Boynton, R. E. New models and techniques in career guidance.
Campbell, R. E., Tiedeman, D. V., & Martin, A. M. Systems under development for vocational guidance.
Cogswell, J. F., Donahoe, C. P., Jr., Estavan, D. P., & Rosenquist, B. A. The design of a man-machine counseling system.
Computer-based vocational guidance systems.
Gelatt, H. B. Information and decision theories applied to college choice and planning.
Impellitteri, J. T. A computerized occupational information system.
Impellitteri, J. T. *The development and evaluation of a pilot computer-assisted occupational guidance program.*
Information system for vocational decisions. *Annual report 1966–67.*
Information system for vocational decisions. *Annual report 1967–68.*
Rundquist, R. Library of occupational information interview tape recordings.
Tiedeman, D. Information system for vocational decisions.
Walz, G. R. The design and implementation of information systems for pupil personnel services.

Information Utilization

Baer, M., & Roeber, E. *Occupational information: Its nature and use.*
Borow, H. Occupational information in guidance practice viewed in the perspective of vocational development theory and research.
Boynton, R. E. New models and techniques in career guidance.
Loughary, J. The information explosion and its implications for the counseling function.

Inservice Programs

Illingworth, R. N. The quad-city industrial orientation program for counselors, Summer 1967.
Pilot Project in career development for distributive education teachers and counselors.
Pruitt, A. Workshop on employment problems of Negroes.

Los Angeles City School District. *Career guidance in-service education.*
Wisconsin State Department of Public Instruction. General Electric summer guidance fellowship programs — 1967.

Instructional Materials

Barrett, R. Your future: an outline for the ninth grade career planning unit.
Beachley, C. L. When guidance rides the airwaves. Young minds are stretched to new horizons.
Dailey, J. T., & Neyman, C. A., Jr. *Development of curriculum materials for teaching basic vocational talents.*
Frank, R. Self-development through vocational awareness.
Hawaii State Department of Education. Educational-occupational unit, grade 11.
Katz, M. R. The description and evaluation of a guidance text for 8th and 9th grade.
Krumboltz, J. Vocational problem-solving experiences for stimulating career exploration and interest.
Minneapolis Public Schools. World of work grade nine.
Roseville Public Schools. *Career planning. An outline for the ninth grade unit.*
Tennyson, W. W. Teachers' role in career development.
Tennyson, W. W. and Klaurens, M. Suggested teaching-learning approaches.

Interprofessional Relationships

Dugan, W., & Burkett, L. APGA-AVA relationships: A dialogue.
Hoyt, K. B. Professional partnerships to serve students.
Kushel, G. Discord in teacher-counselor relations.

Manpower Development

Ginsburg, W. Some comments on national manpower policies.
McArthur, D. W. Manpower from the viewpoint of management.
U. S. Department of Labor. *Career guidance.*
Wolfbein, S. Labor trends, manpower, and automation.

Manuals

Hawaii State Department of Education. Secondary school guidance in Hawaii.
Jeffries, D., & Spedding, S. *Career guidance manual for teachers.*
Leonard, G. E. *How to face future success.*
National Vocational Guidance Association. *Publicity handbook.*

Models

Gysbers, N. *Elements of a model for promoting career development in elementary and junior high school.*
Herr, E. Unifying an entire system of education around a career development theme.
Katz, M. R. A model of guidance for career decision-making.
Winefordner, D. A suggested model for the full-time counselor who conducts and coordinates an exploratory program in grades 7-9.

Noncollege Preparatory Students

Green, A. Oakland, Michigan project.
Hoyt, K. B. The challenge of vocational education to guidance.
Martin, A. M. Multi-media approach to communicating occupational information to noncollege youth.
Martin, A. M., & Hummel, R. Occupational information and vocational guidance for noncollege youth.
Yunker, J. A. Pre-high school vocational group guidance for potential dropouts and non-college-bound students.

Occupational Information

Cook, H. E. *Occupational information materials.* Progress Report No. 1.
Cook, H. E. *Occupational information materials.* Progress Report No. 2.
Cook, H. E. *Occupational information materials.* Progress Report No. 3.
Cook, H. E. *Occupational information materials.* Progress Report No. 4.
Cook, H. E. Selected bibliography of occupational literature in libraries of nine Atlanta public elementary schools.
Gerstein, M., & Hoover, R. VIEW — Vocational information for education and work.
Harris, J. A. A report on the project for computerization of vocational information.
Hopke, W. E. A new look at occupational literature.
Hoppock, R. Educational and occupational information from kindergarten to grade 12: Implications for supervision and counselor education.
Hoyt, K. B. Promising practices in the use of occupational information.
Hoyt, K. B. What kinds of occupational information exist and what are their limitations.
Leonard, R. Developmental career information program.
Letson, J. W. Formulation of models for preparing occupational materials for pupils from various socio-economic levels in grades three through eight.
Letson, J. W. Sequential dissemination of occupational information.
Martin, A. M. Multi-media approach to communicating occupational information to noncollege youth.
Martin, A. M., & Hummel, R. Occupational information and vocational guidance for noncollege youth.
North Carolina State Department of Public Instruction. *Introduction to vocations.*
North Carolina State Department of Public Instruction. *Occupational information. A bibliography.*
Ohio State Department of Education. *Sources of occupational information.*
O'Reilly, P. *The self-administering vocational information system (SAVIS).*
Rundquist, R. Library of occupational information interview tape recordings.
Strong, M. E. National Conference on Occupational Information in Vocational Guidance.
U.S. Department of Labor. *Counselor's guide to manpower and other occupational information.*

U.S. Department of Labor. *Counselor's guide to manpower and other occupational information.*

Wolfbein, S. T. *Occupational information: A career guidance view.*

Occupations

Havighurst, R. J. Youth in exploration and man emergent.

New Jersey State Department of Education. Teaching guide for a model program on introduction to vocations.

North Carolina State Department of Public Instruction. Introduction to vocations.

Paraprofessional School Personnel

Schlossberg, N. K., & Woodruff, J. W. *The career community aide: A workbook and manual for paraprofessionals in guidance.*

Post High School Guidance

College Entrance Examination Board. *Preparing school counselors for educational guidance.*

Super, D. E., Kowalski, R. S., & Gotkin, E. *Floundering and trial after high school.*

Program Development

Barrett, R. *Your future: An outline for the ninth grade career planning unit.*

Brahms, J. A. A proposed guidance program for an area technical-vocational institute.

Career planning handbook. University High School. University of Minnesota.

Chamber of Commerce of the United States. *How to plan economic understanding projects.*

Clarke, R., & Gelatt, H. B. NDEA guidance report to the board of education.

Colorado State Department of Education. Guidance program planning.

Curriculum programs in action. Their administration and evaluation.

Drews, E. M. *The creative intellectual style in gifted adolescents. Being and becoming: A cosmic approach to counseling and curriculum.*

Franklin, F., Murphy, M. R., & Donner, R. Charles Eliot Junior High School team report.

Kentucky State Department of Education, Division of Guidance Services. Planning the career day.

Patterns for progress. *An extension of the blueprint for action.*

Paulson, B. B., & Gordon, A. S. The career development program — a brief description.

Peters, H. D. Project P.A.C.E.

Pierson, G. N. A career decision program for 8th grade.

Shelley, M. Report of elementary school guidance project.

Stiller, A. *Beacon lights.*

Swanson, L. Career information project.

Youst, D. The Rochester career guidance program.

Program Evaluation

Curriculum programs in action. Their administration and evaluation.

Drews, E. M. *The creative intellectual style in gifted adolescents. Process and*

product: A reassessment of students and program.

Gysbers, N.C. An evaluation of the seminar using data obtained from a follow-up survey of summer participants.

Sanstead, J. A survey of the ninth grade occupational information units taught in Minnesota public schools.

Research

Carkhuff, R. R. Counseling research theory and practice — 1965.

Myers, R. A. Research in counseling psychology — 1964.

Tennyson, W. W. Career development, 1968.

Research Methodology

Borow, H. Guidelines for research.

Campbell, R. E. (Ed.) *Guidance in vocational education: Guidelines for research and practice.*

Carkhuff, R. R. Counseling research theory and practice — 1965.

School-Industry Relationship

Firms plan to introduce youth vocational opportunities.

Illingworth, R. N. The quad-city industrial orientation program for counselors, Summer 1967.

O'Dell, F., & Richards, K. W. Akron area schools and industry cooperate to help the disadvantaged.

Odgers, J. G. Coordinating community resources for guidance services.

Robinson, L. R. High school orientation program — a four-phase program of school cooperation.

Self Help Programs

Andros, G. C. *Self-administering vocational information system. Development of the self-component.*

Andros, G. C. *Self-administering vocational information system. Procedure for the development of the unit — the biological-medical field.*

Simulation

Barbula, M. Life career game.

Boocock, S. S. The life career game.

Hansen, L. S. Pilot projects try out life career game with students, teachers, and counselors.

Krumboltz, J. Vocational problem solving experiences.

Leonard, G. School employment security commission.

Varenhorst, B. The life career game: Innovative tool for group counseling.

Sociology

Miller, D. C., & Form, W. H. *Industrial sociology.*

Slocum, W. L. The potential contribution of sociology to occupational guidance through the curriculum.

Student Characteristics

Drews, E. M. *The creative intellectual style in gifted adolescents. Motivation to learn: Attitudes, interests and values.*

Tillery, D. Grade eleven profile 1968 questionnaire selected items (SCOPE).

Student Interests

Ohio School Counselors Association and Ohio Music Association. What is best for the student?

A student career exploration project.

Ohio Vocational Interest Scale.

Student Problems

Anonsen, G. *Students', counselors' and teachers' perceptions of the severity of students' problems.*

Norman, J. *Students' and teachers' perceptions of students' problems and of school help on these problems.*

Systems Approach

Computer-based vocational guidance systems.

Flanagan, J. C. Developing a functioning model of an educational system for the '70's.

Instructional Systems Corporation and Follett Counseling Information Service. A systems approach to group guidance.

Minor, F. J. Third symposium for systems under development for vocational guidance.

Teacher Participation

Pruitt, A. S. Teacher involvement in the curriculum and career guidance.

Tennyson, W. W. *The teacher's role in career development.*

Tennyson, W. W., & Meyer, W. G. *Pilot training project for teachers of distribution and marketing focusing on responsibilities for career development.*

Teaching Guides

New Jersey State Department of Education. Teaching guide for a model program on introduction to vocations.

Tennyson, W. W., & Klaurens, M. Suggested teaching-learning approaches for career development in the curriculum.

Technical Education

Dunwoody offers course, "Counseling for industrial, trade and technical occupations."

Hoyt, K. B. A challenge to vocational guidance: The specialty-oriented student.

Hoyt, K. B. An introduction to the specialty-oriented student research program.

Maumee High School-Penta County Vocational School.

Ohio State Department of Education, Division of Guidance and Testing. *Ohio notebook of public technical education.*

Technological Advancement

Samler, J. The counselor and technological change.

San Francisco State College Center for Technological Education. *Technology and education in the 21st century.*

4

Technology

San Francisco State College Center for Technological Education. *Description of activities.*
Tiedeman, D., & Dudley, G. A. Prospects for technology and commerce in the mediation of vocational development for vocational materials.

Vocational Development

Bailey, J. A. Career development concepts: Significance and utility.
Borow, H. The development of occupational motives and roles.
Crites, J. O. Vocational development and vocational education in adolescence.
D'Costa, A., Winefordner, D. W., Odgers, J. G., & Koons, P. B., Jr. *Ohio vocational interest survey.*
Gambino, T. *Increasing the vocational awareness of fifth and sixth grade pupils.*
Gordon, A. S. Career development program for elementary intermediate grade children.
Gribbons, D., & Lohnes, P. R. Career development.
Holland, L. Major programs of research on vocational behavior.
Hoyt, K. B. Meeting the challenge of vocational development in a changing society.
Mittelholtz, E. Vocational orientation for Indian students.
Morehead, C. G., & Fuller, F. G. (Eds.) *Career planning and development.*
National Vocational Guidance Association. *Conference on implementing career development theory and research through the curriculum. . .*
Osipow, S. H. *Theories of career development.*
Perrone, P. A. Vocational development.
Roeber, E. C. Concepts in career planning.
Super, D. E. *Career development: Self-concept theory.*
Super, D. E. A theory of vocational development.
Super, D. E., Crites, J., Hummel, R., Moser, H., Overstreet, P., & Warnath, C. *Vocational development: A framework for research.*
Super, D. E., & Overstreet, P. L. *The vocational maturity of ninth grade boys.*
Tennyson, W. W. Career development.
Tennyson, W. W., & Klaurens, M. Behavioral objectives for career development.
Tennyson, W. W., & Klaurens, M. Suggested teaching-learning approaches for career development in the curriculum.
Tiedeman, D., & Dudley, G. A. Prospects for technology and commerce in the mediation of vocational development for vocational materials.

Vocational Education

Board of Cooperative Educational Services. *Multi-occupations at Harkness Center.*
Burkett, L. A. The role of guidance in vocational education.
Campbell, R. E. (Ed.) *Guidance in vocational education: Guidelines for research and practice.*
Hoyt, K. B. The challenge of guidance to vocational education.
Hoyt, K. B. The challenge of vocational education to guidance.

Michigan State Board of Education. *Establishing and operating area vocational-technical education programs in Michigan.*

Michigan State Department of Education. *Highlights of vocational education in Michigan.*

Michigan State Department of Education. *A vertically integrated occupational curriculum for schools in Michigan.*

New directions in vocational education. Case studies in change.

Rosenberg, J. M. (Ed.) *New conceptions of vocational and technical education.*

Special School District of St. Louis County. *Vocational-technical education counselor handbook.*

Vocational Guidance

Drier, H. Vocational guidance in action.

DuBato, G. S. A plea for vocational guidance in the schools.
Including suggestions for group guidance activities on self-appraisal and careers for grades K through 12.

Dugan, W. E. Vocational guidance: A new accent in American education.

Odgers, J. G., & Gysbers, N. C. (Ed.) *National Seminar on Vocational Guidance.*

Work Experience Programs

Eisen, N. B. *Exploratory work experience education.*

Eisen, N. B. *Work experience in the Whittier Union High School.*

Firms plans to introduce youth vocational opportunities.

Youth Employment

Garbin, A. P., Jackson, D. P., & Campbell, R. *Worker adjustment: Youth in transition from school to work.*

Green, L. F. *Counseling employment-bound students.*